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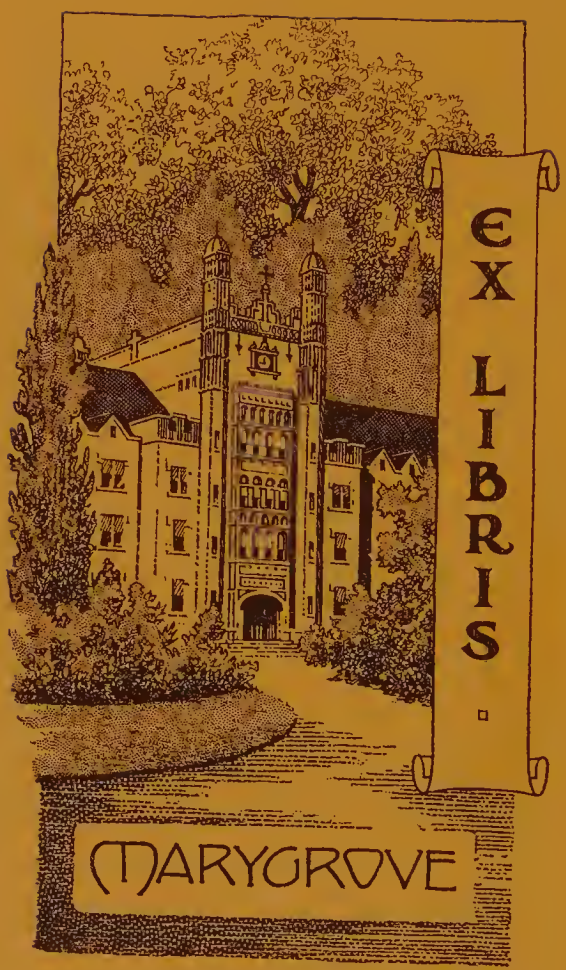
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NATIONAL SOCIETY FOR THE STUDY OF EDUCATION

Yearbook Publications

VOLUME XIV

YEARBOOK XXVIII

1929

PUBLIC SCHOOL PUBLISHING COMPANY

BLOOMINGTON, ILLINOIS

VOLUME FOURTEEN

TWENTY-EIGHTH YEARBOOK, Parts I and II

Preschool and Parental Education

Prepared by the Society's Committee

B. T. Baldwin (deceased), Arnold Gesell, Patty S. Hill, Douglas Thom, Edna White, Helen T. Woolley, and Lois H. Meek (Chairman)

Assisted by

W. E. Blatz, Agnes Burke, Grace Caldwell, Lelah M. Crabbs, Bess V. Cunningham, Mary D. Davis, Charlotte G. Garrison, Ernest Groves, Sidonie M. Gruenberg, Ruth Haefner, Francis A. Hungerford, Harriet Johnson, H. E. Jones, Grace Langdon, Elizabeth Lord, Lawson Lowrey, Elizabeth Moore, Mary Murphy, Winifred Rand, Mae Raymond, Mandel Sherman, G. S. Stevenson, Mary Sweeny, Nell B. Taylor, Flora Thurstou, Leona Vincent, Beth Wellman, C. A. Wilson, and Elizabeth Woods

The Twenty-Eighth Yearbook is the most significant contribution that has been made to the literature of preschool and parental education. A request for a yearbook in this field was made to the National Society for the Study of Education in February, 1925, and the committee was formally organized in October, 1925. Dr. Lois Hayden Meek, Educational Secretary for the American Association of University Women, was appointed chairman and the other members of the committee were chosen to represent various aspects of preschool and parental education; Dr. Bird T. Baldwin and Dr. Arnold Gesell, research in child development; Professor Patty Smith Hill, education of young children; Miss Edna N. White, home economics aspect of preschool and parental education; Dr. Helen T. Woolley, psychological aspects of personality problems of childhood; Dr. Douglas Thom, the psychiatric aspect of child problems. A generous grant from the Laura Spelman Rockefeller Memorial, supplementing the appropriation of the National Society for the Study of Education, made possible the work of the Committee.

The seven members of the Committee and the twenty-nine contributors associated with them, have assembled and presented in the Yearbook a most comprehensive survey of the present status of preschool and parental education. In setting forth the Committee's purpose for the Yearbook, Dr. Meek says in the introduction: "The Committee hopes that the present yearbook will help to show the trends of the movement, to point out the need for carefully trained personnel, to emphasize the varied influences of home, school and community life, and to focus attention on the total aspect of child development—physical, emotional and social, as well as intellectual." She further

states that the Committee worked and thought together on practically every part of the book in an effort to unify the contributions of the many who supplied the wealth of data, and to present the material concerning the education of children and parents from a point of view which would integrate a movement participated in by many groups with varying objectives and backgrounds.

Throughout the book the term preschool refers "to the whole period of infancy and early childhood, from birth up to elementary school entrance at the age of six or seven." The term parental education is used "in its broadest sense to include all methods and devices of adult education intended to assist parents in the understanding and care of their children."

The book is divided into two parts—Part I on organization and development of preschool and parental education, and Part II on research and method in this field. In Part I, the history of the movement is given, including a brief discussion of the beginnings of the kindergarten, the Montessori school, the nursery school, child health centers, play schools and child study groups. The following general considerations underlying preschool and parental education are stressed: the importance of the preschool years from the standpoint of growth and development, the influence of home and parents, the need of supplementary educational agencies and fundamentally of educating parents themselves. The present organization of education for preschool children is given in considerable detail covering the family as an agency, day nurseries, maternity and infant welfare centers, the clinics, nursery schools and kindergartens. Part II also includes a survey of current programs in parental education and experiments in preparental training, and indicates what is being done in professional training for research and instruction in preschool education, in the professional training of nursery school teachers, and in the training of leaders in parental education.

Part II, on research and method, opens with research activities in the field of child development, indicating the present status of research in child development and citing the outstanding studies of motor, language, intellectual, emotional and social development and of physical growth. A section follows on educating preschool children, with a thorough discussion of child activities, including those leading to the establishment of routine habits, play, art experiences, language and literature and social development. Provision for individual differences and the records of young children are also introduced. A concluding section deals with methods and materials for the education of parents and of practical ways of educating parents and teachers to the value of mental hygiene.

The Twenty-Eighth Yearbook is a very valuable source book in the field of preschool and parental education—a book which administrators, supervisors, teachers and parents interested in general or specialized education for the preschool child or the parent will find an indispensable addition to their libraries.

THE
TWENTY-EIGHTH YEARBOOK

OF THE

NATIONAL SOCIETY FOR THE STUDY OF EDUCATION

PRESCHOOL AND PARENTAL EDUCATION

PART I. ORGANIZATION AND DEVELOPMENT

PART II. RESEARCH AND METHOD

Prepared by the Society's Committee

B. T. Baldwin (deceased), Arnold Gesell, Patty S. Hill, Douglas A. Thom, Edna N. White, Helen T. Woolley, and Lois H. Meek (*Chairman*)

Assisted by

W. E. Blatz, Agnes Burke, Grace Caldwell, Lelah M. Crabbs, Bess V. Cunningham, Mary D. Davis, Charlotte G. Garrison, Ernest Groves, Sidonie M. Gruenberg, Ruth Haefner, Frances A. Hungerford, Harriet Johnson, H. E. Jones, Grace Langdon, Elizabeth Lord, Lawson Lowrey, Elizabeth Moore, Mary Murphy, Winifred Rand, E. Mae Raymond, Mandel Sherman, G. S. Stevenson, Mary Sweeny, Nell B. Taylor, Flora Thurston, E. Leona Vincent, Beth Wellman, C. A. Wilson, and Elizabeth Woods

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Edited by
GUY MONTROSE WHIPPLE

THIS YEARBOOK WILL BE DISCUSSED AT THE CLEVELAND MEETING OF THE NATIONAL SOCIETY, FEBRUARY 23 AND 26, 1929, 8:00 P.M.

PUBLIC SCHOOL PUBLISHING COMPANY
BLOOMINGTON, ILLINOIS
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The chances are that practically every reader of this yearbook received such training as he did receive during the first five or six years of his life at the hands of adults who were convinced that the chief problem during that period was to maintain in the said reader a reasonable condition of health, including the avoidance, so far as feasible, of the stock diseases of infancy and early childhood. The chances are that, save for the few who attended kindergartens, our readers received but scant educational training, and that of a more or less sketchy and incidental, not to say accidental, character during that period. The chances are, furthermore, that the parents of practically every reader of this yearbook dispensed whatever training they did dispense in accordance with certain stock, rule-of-thumb precepts that they had acquired from their parents, modified somewhat perhaps, here and there, by contact with the differing notions of other parents and to a lesser degree by ideas picked up from the chance reading of books on the feeding of infants and like topics.

Now, however, there has arisen a new and different conception of the educational significance of the first half-dozen years of life. Infancy and early childhood are held to be of fundamental and far-reaching importance for the entire development of the individual—of importance, that is to say, not only with respect to his physique, his physical well-being, but even more with respect to his mental well-being, his temperamental and emotional outlook upon life. Adults, and particularly parents, are held responsible, therefore, to an extent and in ways not before deemed possible, for the future success of the child, and these success-conditioning factors are held to be peculiarly operative during the preschool years.

This new conception of the significance of the preschool period has led to the development of several new educational activities, more especially to the development of nursery schools and of new organizations and methods for the better training of parents. What the ultimate meaning of these developments may be for our general program of public education can hardly be discerned clearly at present; the whole movement is too recent to predict its outcome with assurance.

Whatever may be this ultimate meaning for the public-school program, members of the National Society for the Study of Education must acknowledge a debt of gratitude to the Society's Committee on Preschool and Parental Education for having assembled in this Twenty-Eighth Yearbook so comprehensive and painstaking a survey of the present status of the movement herein described. It is safe to say that nowhere else in the literature can so useful a presentation be found.

The seven members of the Committee and the twenty-nine associated contributors were confronted by a very real task in their efforts to gather, analyze, and reduce to systematic form the well-nigh innumerable bits of information that they were able to discover bearing on the general theme. After the Committee had done this work, it was discovered that the presentation it felt to be commensurate with the adequate description of the movement exceeded even the additional space placed at its disposal by the Board of Directors of the Society. The editor wishes, accordingly, to absolve the Committee from any criticisms that may arise in the reader's mind of lack of proportion or adequacy in the Committee's report. He trusts, however, that the numerous deletions of material which lack of space compelled him to make at the last moment will not detract seriously from the value of the yearbook.

G. M. WHIPPLE.

PART I

ORGANIZATION AND DEVELOPMENT

CHAPTER I

INTRODUCTION

a. Purpose of the Yearbook. The Committee has aimed to present a yearbook which will bring to educators and others interested a survey of the fields of preschool and parental education. During the past ten years there has been such a phenomenal growth in the interest in the welfare of young children that it seemed pertinent to attempt at this time to bring together the information available in the field and to present the movement to those engaged in education. It is impossible to separate those activities which relate to the education of young children and those which relate to the education of parents. The two are so interrelated and so correlated that it is essential to discuss them together.

The Committee realizes that there are dangers in attempting to publish anything concerning a field which is so new and therefore subject to sudden and perhaps volcanic changes. But the very speed of the present development has convinced the Committee that some source is needed to describe, interpret, and perhaps guide. The Committee hopes that the present yearbook will help to show the trends of the movement, to point out the need for carefully trained personnel, to emphasize the varied influences of home, school, and community on child life, and to focus attention on the total aspect of child development—physical, emotional, and social, as well as intellectual.

b. Activities of the Committee. A request for a yearbook on preschool and parental education was made to the National Society for the Study of Education in February, 1925. The Directors expressed interest and during the next eight months the Committee was organized and formally appointed in October, 1925.

Dr. Lois Hayden Meek was appointed chairman. The other members of the main committee were selected to represent various aspects of preschool and parental education: Dr. Bird Baldwin and Dr. Arnold Gesell, research in child development; Professor Patty Hill, education of young children; Miss Edna White, home economics aspect of preschool and parental education; Dr. Helen Thompson Woolley, psychological aspects of personality problems

of childhood; Dr. Douglas Thom, the psychiatric aspect of child problems.

The work of the Committee was made possible by a generous grant from the Laura Spelman Rockefeller Memorial, supplemented by an appropriation from the National Society for the Study of Education.

There have been five meetings of the main committee. In Washington, D. C., May 4, 1927, there were present Dr. Gesell, Dr. Baldwin, Dr. Thom, Professor Hill, and the Chairman. The Committee met for three consecutive days in Atlantic City from December 1-4, 1927, with Dr. Thom, Dr. Gesell, Professor Hill, Miss White, Dr. Lelah Crabbs as substitute for Dr. Baldwin, and the Chairman present. In Boston there was an all-day meeting on February 26, 1928, attended by Dr. Gesell, Dr. Baldwin, Miss Sweeny as substitute for Miss White, Dr. Thom, Professor Hill, and the Chairman. Dr. Lelah Crabbs and Miss Elizabeth Moore were present for the entire meeting and Miss Mae Raymond and Miss Grace Langdon came in for part of the discussion. Another three-day meeting in Atlantic City, May 12-14, 1928, was attended by Professor Hill, Dr. Gesell, Dr. Thom, Miss White, the Chairman, and Dr. Whipple, Secretary of the National Society for the Study of Education. At the final meeting in New York City, September 29-30, 1928, there were present Dr. Gesell, Professor Hill, Dr. Thom, Miss White, and the Chairman.

Besides these five meetings of the main committee there have been about twenty-seven meetings of sub-committees working on special sections or chapters of the Yearbook, and the Chairman has had numerous conferences with individuals.

c. Plan of Work. At the outset the Committee adopted the plan of a unified yearbook which would be the product of the Committee as a whole rather than the work of isolated contributors. Each chapter of the Yearbook therefore represents the work of the whole committee. This means not merely that each member of the Committee was willing to approve each chapter but that they worked and thought together on practically every part of this book. The outlines for all chapters were discussed and criticized and the manuscripts of many chapters were read and discussed, paragraph by paragraph, in committee meetings. In short this basis of work-

ing means that the Committee has indeed endeavored to present the material concerning the education of children and parents from a point of view which would integrate a movement which is a part of the activity of so many groups with varying objectives and background.

d. Organization of the Yearbook. It was intended to devote only one part of the Yearbook to the subjects of preschool and parental education. However, as the work developed, there seemed to be need for more space in order adequately to present the scope of the movement. It was still deemed unwise to separate preschool and parental education; accordingly, the volume was divided on the basis of administration and methods.

Part I therefore contains chapters dealing with general history and basic considerations, followed by surveys of the agencies and their activities concerned with educating preschool children and parents.

Part II discusses methods of educating young children and parents, and includes reports of research in child development.

The Yearbook is not limited to purely scientific studies, but tries to emphasize best tendencies. Section I of Part II is the only section organized from a technical point of view and is included in order to indicate the scope of the problems which scientific investigators have already undertaken, and also to bring out the need for further research in this field.

e. Terminology. It is desirable to define a few of the major terms in the main title and chapter headings of this Yearbook. The term *preschool* is of recent currency. Even ten years ago it had a strange and artificial sound, particularly when attached as an adjective to the word *child.* The term *preschool* was first commonly used by child hygienists and public health workers. When, after the war, the preschool period of childhood was characterized as the "No-Man's Land" in the field of social endeavor, reference was intended to the gap in child health provisions between the infant welfare station and the public school. Many persons still use the term *preschool* specifically to apply to this age period from two years to six years. Historically, this is a justifiable restriction of the term.

The continuity of childhood has, however, resulted in a more flexible inclusive use of the word to comprise the whole period of infancy and early childhood, from birth up to elementary-school entrance at the age of six or seven. In the present yearbook, the broader application of the term will be favored, because this increasing usage is entirely logical and is indeed the outgrowth of the essential unity of the problems of early education and hygiene.

Contextual inflections and specific terms like *infant, toddler, runabout,* and *prekindergarten child* will readily take care of more restrictive applications. The age of the infant ranges from birth to approximately two years. The neo-natal period of infancy is the critically important first month after birth. The toddler and runabout range from about one and a half years to five years of age. The prekindergarten child usually suggests the ages from two years to four or five years. Such terms as *subprimary* and *preprimary* are self-descriptive. In this connection it is interesting to note a tendency to make the preformal, preacademic period of education extend beyond the fifth year into the seventh year. The double hyphenation *nursery-kindergarten-primary education* is a symptom of this assimilation. Educators will be interested to note that Pestalozzi consistently recognized the educational importance of the preschool period. His last speech, made when he was over eighty years old, bore the title, "The Simplest Methods Whereby to Educate a Child at Home from the Cradle to the Sixth Year."

The term *parental education* will be used in its broadest sense to include all methods and devices of adult education intended to assist parents in the understanding and care of their children. *Preparental education* is directed to the adolescent, usually prior to marriage, while still within the scope of secondary, collegiate, and continuation schooling. *Parental guidance* is a concrete form of instructional, advisory, suggestive assistance directed toward individual problems of child care and family life. This assistance is more or less systematically rendered through a consulting center, school or clinic. A *guidance nursery* is a type of nursery adapted for the individual training and adjustment of children and guidance of their parents. It differs in this individualizing approach and organization from a nursery school of the congregate, or group, type. The distinction between a *nursery school* and a *day nursery* will be detailed in the text and need not be anticipated here.

The term *home* will be frequently used in the text. If any definition of this protean term were attempted, emphasis would have to be placed on the functional aspects of family life and on the parent-child relationship. The modern home is inevitably undergoing change. In this process of change the conscious educational activities and responsibilities of family organization need clearer formulation. The problem will be considered in terms of child care rather than physical boundaries. There is no fundamental antithesis between the home and preschool agencies of education, whether public or private, if these agencies conduct their work in such a way as actually to strengthen and enrich the relations between parents and their children. The parent-child relationship is a psychological complex, which is affected not only by the rearing of the child in the home, but also by all of the factors, domestic and extra-domestic, which enter into preschool and parental education.

f. Acknowledgments. The Committee has had the help of various sub-committees in the preparation of this Yearbook and is greatly indebted to them for their painstaking work and splendid coöperation. Twenty-nine of these contributors have been designated as associate members and are listed in the introductory pages. Many others have given valuable criticisms, suggestions, or material, and acknowledgment is made of such contributions through the volume.

An undertaking such as this necessarily needs the help of many and to all of those who have contributed in any way we are deeply grateful. Especially are we indebted to Annabelle Day for able assistance during committee meetings and in the preparation of the manuscripts.

The Committee wishes to take this opportunity to express its appreciation of the work of the Laura Spelman Rockefeller Memorial in encouraging, fostering, and assisting various projects for the improvement of the welfare of young children. This foundation, which was organized in 1918 for the advancement of the social sciences, prefers to facilitate positive and preventive programs. Consequently, it has provided means for more intensive research in child development by the establishment of several new child-study laboratories and the furtherance of those already organized, and

has launched several extensive programs for the dissemination of information through parent education. It also has made provision for committee meetings and conferences that have served as a clearing house of ideas and experiences in this field, as well as for a better understanding and relationship between the scientists from all branches of knowledge that affect children.

The Committee has been deeply distressed and greatly handicapped by the death of Dr. Bird Baldwin in May, 1928. As a member of the Committee, Dr. Baldwin had given much time and thought to the Yearbook and had incorporated the interest of a large group of his staff at the Child Welfare Research Station, University of Iowa. We are especially indebted to Miss Elizabeth Moore, Miss Frances Hungerford, Dr. Beth Wellman of the staff, and to Dr. George Stoddard, acting director of the Station, for loyal support and untiring efforts to complete the sections begun by Dr. Baldwin. The Committee is happy that this Yearbook presents much of the thinking and philosophy of Dr. Baldwin, who was one of the pioneers and leaders in the new movement for the better understanding of children.

For the Committee,
Lois Hayden Meek, *Chairman.*

CHAPTER II

HISTORY OF THE MOVEMENT IN PRESCHOOL AND PARENTAL EDUCATION

I. Introduction

A most significant trend in the forward movement of organized education is toward a closer coördination of the facilities of the home and of the school. If one were to inquire of any student of social progress, "What is the newest development in the educational world?" the answer would almost surely be, "Schools for infants and a constructive program of education for parents."

Interest in the young child and his parents has spread so rapidly within the past ten years as to appear to be a new development, but the movement is not altogether modern. A search through the annals of ancient history reveals the occasional philosopher, preacher, and educational reformer contemplating the significance of parent-child relationships and planning for the improved education of infants and young children.

a. Foreshadowings. About four hundred years before the Christian Era, Plato stressed the importance of early childhood and the necessity for family coöperation: "Education and admonition commence in the first year of childhood and last to the very end of life. Mother and nurse and father and tutor are vying with one another about the improvement of the child as soon as ever he is able to understand what is being said to him."[1]

Plato's conception of education also foreshadowed the relatively recent recognition of the importance of mental health as an educational objective: "I call education the virtue which is shown by children when the feelings of joy or sorrow, of love or of hate, which arise in their souls, are made comfortable to order."[2]

b. Puritanical Teachings. For many hundreds of years, following the spread of the Christian religion, teacher and moralist

[1] Forest, Ilse, *Preschool Education,* quoted from Plato's *Protagoras.* Selections from Jowett's Translation, pp. 20 ff., Clarendon Press, Oxford, 1885.

[2] Taylor, Nell Boyd, *The Education of the Preprimary Child,* an unpublished thesis, p. 6. Quoted from Brockett, L. P., *History and Progress of Education.*

appear to have been concerned primarily with admonishing parents to attend to the religious training of their children. James Janeway, a Puritan minister who lived in the late eighteenth century, addresses parents as follows: "Your child is never too little to go to hell." And again: "Put your children upon learning their catechism and Scriptures and getting to pray and weep by themselves."[3]

c. Reaction against Puritanical Doctrines. Fortunately for parents and their children, thoughtful leaders of the late eighteenth and early nineteenth centuries reacted against stern, Puritanical doctrines and educational methods such as those advocated by Janeway. Pestalozzi, for example, in his *Letters on Early Education,* expressing a firm belief in the ability of mothers to educate their children, makes some suggestions as to parental procedures: "The mother is qualified, and qualified by her Creator himself, to become the principal agent in the development of her child. . . . . What power can be more influential, more stimulating than maternal love? . . . . What I would demand of her is only a thinking love. . . . . Fear can never act as a moral restraint. . . . . The consequences of severity are no doubt as mischievous as those of indulgence. Against the excess of both, I can only repeat the recommendation of affection and firmness."[4]

d. Emphasis on Parents. Abate Aporti, a Catholic priest, interested in the establishment of elementary schools in Italy during the early nineteenth century, contributed to the development of preschool and, more particularly, of parental education a further constructive point of view: "We wish and expect children to be a very different race from their parents, but this must depend in a great measure upon the conduct of the parents themselves. . . . . While we educate children we ought not to lose sight of the parents. . . . . If those who were about children of tender years were virtuous, the great majority of children would grow virtuous likewise. . . . . Parents ought to abstain in the presence of their children from speaking ill of other people, as this is apt to engender contempt and anti-social feelings. . . . . Squabbles between father

[3] Parker, S. C., *A Textbook in the History of Modern Elementary Education.* Boston: Ginn, 1912. P. 162.

[4] Forest, Ilse, *Preschool Education,* quoted from Pestalozzi, John Heinrich, *Letters on Early Education,* pp. 9 ff.

and mother, recriminations, hard words, tend to destroy filial respect.''[5]

Forecast thus by Pláto, and developing very slowly during succeeding centuries, the preschool and parental education movement seems to have been somewhat more definitely launched about one hundred years ago. Then, as now, the attitude of the individual leader of parents seems to have determined his method of approach to parental problems: while one warned and threatened, another recommended and suggested, and a third outlined a few definite parental procedures. As the movement has progressed during the past century, the most evident growth appears to have been in the clearer definition of objectives in the education of young children and their parents, in a more sympathetic attitude toward parental problems, and in improved methods of organization of procedures.

II. Infant Schools

So many threads of social progress are interwoven in the development of preschool and parental education that a discussion of sources under separate headings appears to be arbitrary and tends to be misleading. However, there seems to be no other way to emphasize sufficiently the various factors which have contributed to the present status of the movement. In tracing the development of the kindergarten and nursery school as organized systems of preschool education, the transition of public attitude toward early education parallels improvement in organization. The early history of the kindergarten and the nursery school indicates a common origin in the early infant schools. These infant schools which preceded the kindergarten and nursery school as now functioning appear to have been philanthropic in purpose, planned primarily as a substitute for home care rather than as a supplement to the education of the normal home.

1. Influence of Comenius

John Amos Comenius (1592-1670) seems to have been among the first to realize that social conditions could be improved by broadened education. Like most of his contemporaries, he be-

[5] Forest, Ilse, *Preschool Education,* quoted from ''Infant Schools in Lombardy,'' *Quarterly Jour. of Educ.,* Vol. X, April-October, 1835.

lieved in the innate depravity of childhood, but also believed that education could correct evil tendencies. He has been designated as the "Father of the Modern Kindergarten," but his title may well be expanded to include the modern nursery school. Parental education also seems to have occupied a definite place in his educational scheme. Living at a time when education was primarily for purposes of religious teaching, he advocated a mother school in every home in order to "care especially for the soul . . . . and next attend to the body that it may be a fit and worthy habitation for the soul."[6] In his *School of Infancy* he outlined a home curriculum which included, among numerous other experiences food, sleep, fresh air, and exercise.

He also urged mothers to nurse their infants and argued for regularity of habits. In carrying his educational program into the home he suggests one important aspect of the modern nursery school.

2. Eighteenth-Century Educators

a. Oberlin. A little more than a century later, Jean Frederic Oberlin (1740-1826), a Lutheran minister, established an infant school at Walbach, France. His purpose appears to have been philanthropic, with religious and moral training as chief objectives. The living conditions of the peasants of France were wretched at that time, following years of war. Oberlin perceived the connection between physical misery and moral degradation and planned schools to care for the young children of the poor. Although his effort was not well-supported at the time by the people who were in a position to help him, infant schools were systematized and adopted as a part of the French national system about fifty years later.

b. Pestalozzi. In Switzerland, a contemporary of Oberlin, John Heinrich Pestalozzi (1734-1805), was also working to improve the conditions of the poor through education. His work was more eagerly received than that of Oberlin, and his influence upon preschool and teacher-training institutions of later years can readily be traced. Rousseau's belief in the freedom of the child in school and Locke's interest in psychological methods of teaching were evi-

[6] Taylor, Nell Boyd, *The Education of the Preprimary Child*, p. 16. Quoted from Monroe, Will, *The Great Educator—Comenius.*

denced in Pestalozzi's ideas of educational method. His early experiments contributed directly to the kindergarten as outlined by Froebel some years later. His emphasis upon the importance of infant education and consequent attention to the life of the child in the home can also be traced in the later infant schools of England and France. He hoped to bring about social reform through training in domestic industries. The Mayos, whose names are associated with the English nursery-school movement, studied with Pestalozzi. Through them his influence upon the later infant schools of England was direct.

3. Early Schools of England

a. Schools of Robert Owen. The first infant schools of England and Scotland were planned with a purpose which was not unlike that of the day nurseries of the present day, but an organized scheme of educational procedure marked the schools from the first. The pioneer in the movement in Scotland was Robert Owen, a cotton-mill owner. Impressed with the suffering of the laboring classes due to the Industrial Revolution, as workers changed from rural to city life, Owen felt the necessity for caring for the young children who were left at home while their mothers and fathers were at work. Following some years of social experiment in New Lanark, Scotland, he opened an infant school in 1816. Like Pestalozzi and Rousseau, he reacted against the religious and moral teaching which had constituted the main objective of earlier schools and stressed the importance of habit-formation. In his emphasis upon social habits he is not unlike modern preschool teachers. While it is not possible to trace all of the earlier efforts which contributed to Owen's point of view, the teaching of habits as stressed by John Locke, Rousseau's emphasis upon the freedom of the individual, and the methods of Pestalozzi are suggested in Owen's program. Locke (1632-1704) had argued that character can be formed only through the establishment of right habits: "Children are not to be taught by rules which will always be slipping out of their Memories. What you think necessary for them to do, settle in them by an indispensable Practice as often as the Occasion returns; and if it be possible, make Occasions."[7]

[7] Parker, *Op. cit.*, p. 155.

Owen's early experiments in Great Britain undoubtedly influenced the later infant school movements in Belgium, Germany, France, and the United States. During the twenty-two years that intervened between the establishment of Owen's infant school and the demonstration of Froebel's kindergarten system in Germany, the English nursery-school movement progressed rapidly, although the ideals of Owen were not always well maintained.

Owen employed as a teacher James Buchanan, "a poor, simple-hearted weaver, who had previously been trained by his wife to perfect submission to her will . . . . who loved children strongly by nature."[8] The selection of this simple weaver proved to be less desirable than Owen had anticipated, for within two years Buchanan was placed in charge of an infant school opened in London in 1818 by Lord Brougham and James Mill. The mild methods of Owen gave way to the stern discipline of fear which Buchanan's wife enforced, and his school furnished a poor model for the later experiment of Samual Wilderspin.

b. Publicity in England. The school which was directed by Samuel Wilderspin was opened in Spitalfields, London, by the Society of Friends in 1820. Wilderspin's chief contribution to the progress of the infant-school movement was the publicity which he gave to early childhood education. He was influential in the adoption of infant-school education in Great Britain as a regular part of public education, some fifty years later, when schools for children between the ages of three and seven were organized.

c. Methods of Pestalozzi. The Mayos, Charles and Elizabeth, were instrumental in introducing the methods of Pestalozzi into the English infant schools. In 1836, the Reverend Charles Mayo urged the foundation of the Home and Colonial Infant School Society for the special purpose of training teachers according to the methods of Pestalozzi. Their theory appears to be an improvement upon the formalism of earlier schools, although religious training occupied a prominent place.

While Owen, Buchanan, Wilderspin, and the Mayos were contributing directly to the infant-school movement in England, interest in the education of the young child was also evident in

[8] Forest, Ilse, *Preschool Education.* Quoted from Owen, *Life of Robert Owen, Written by Himself* (published 1857). G. Bell, London, 1920. P. 192.

France, Germany, Belgium, and Italy. The work of Abate Aporte in Italy is particularly significant because of his interest in the education of parents.

III. Beginnings of the Kindergarten

1. Froebel's Contribution

The part played by Froebel in the development of the modern preschool movement must not be underestimated, although his ideals of education have contributed more to the modern program of preschool education than his actual procedures. About a decade later than the establishment of the Home and Colonial Infant School Society in London, Frederic Froebel (1782-1852), the founder of the kindergarten, was the first educational leader to outline a definite program of procedures with a parallel statement of ideals.

Usually mentioned only in connection with the kindergarten movement, the writings of Froebel reveal also a great interest in the education of parents. Like Pestalozzi, Froebel seems to have credited the mothers with an instinct for caring for infants, but also like Pestalozzi, he believed that parents could be helped to better ideas of child direction. His program marks a high point in the transition from the old ideal of organized education as a substitute for home care. In June, 1848, in a circular sent out to call a conference of German teachers and educators to discuss the kindergarten system he writes: "All Germany is looking for a reform in education. . . . . If the building is to be solid we must look to the foundations. The home education of rich and poor alike must be supplemented. . . . . It therefore behooves the state to establish institutions for the education of children, of parents, and of those who are to become parents."[9]

2. Early Developments in the United States

The development of preschool education in the United States during the fifty years following the initial efforts of Froebel is most significant if the present status of the nursery-school movement is to be appreciated.

Prior to the establishment of the first kindergartens in the

[9] Hauschmann, Alexander Bruno. *The Kindergarten System.* London: S. Sonnenschein, 1897. P. 183.

United States, Robert Owen had purchased the village of Harmony, Indiana, and about 1826 had established a nursery school of over one hundred children as a part of his scheme for social reform. This nursery school was conducted by the wife of Joseph Neef, who was an associate of Pestalozzi.

About twenty years later, the first German-American kindergartens were organized.[10]

Following the early German-American kindergartens, the first school of the pioneer American type was opened in Boston in 1860 by Miss Elizabeth Peabody, who spent some time in Europe studying Froebel's principles. Twelve years later, Claria Boelte established a school which was probably the first demonstration of a Froebelian kindergarten in this country. Susan Blow, the well-known pioneer, was trained in this kindergarten and became the outstanding expositor of the philosophical kindergarten.

The three leaders who trained the early kindergarten teachers in the United States, Elizabeth Peabody, Susan Blow, and Elizabeth Harrison, were all expositors of a vague philosophy which caused the kindergarten movement to be somewhat mystical in theory. The transition from the transcendental philosophy of the early kindergarten to the objective methods of the more free organization required about forty years, but since 1900 the progress of the modern kindergarten has been little hampered by violent disagreements as to fundamental purposes.

Although the early kindergarten in the United States had little in the way of actual procedure to contribute to the modern nursery school, the formalism of practice characteristic of these early schools appears occasionally in later nursery schools.

The present movement in progressive kindergarten education owes its greatest early impetus to the child-study interests of Dr. G. Stanley Hall and Dr. John Dewey[11] and to the leadership of Miss Anna Bryan, Miss Patty S. Hill in Louisville, and Miss Alice Temple in Chicago. The importance of a well-defined plan of child study, as now operative in all nursery schools, apparently owes much to this early child-study movement in the United States

[10] Vandewalker, Nina, *The Kindergarten in American Education.* New York: Macmillan, 1908. Ch. II.

[11] For a more complete discussion of the changes which these educators brought about in the kindergarten, see Chapter VII.

and to the resulting interest in a program of freely organized education.

IV. The English Nursery School

In tracing the development of preschool education in the twentieth century as it bears most directly upon the modern preschool and parental education movement, the development of the English nursery school furnishes an example of the merging of earlier educational forces.

a. The Beginnings. The nursery school was officially started in England in 1908 when the Board of Education sent out a circular proposing the care of children of preschool age. The first nursery school in London was established by the McMillans in 1909 to care for the neglected children of poor parents.[12]

The English Education Act of 1918 provided for nursery schools as a part of the public system. Many free kindergartens had been established in England prior to this time, and these schools furnished the pattern for the nursery schools established under the Fisher Act of 1918. Like the earlier infant schools, these nursery schools were philanthropic in purpose, although educational objectives were well defined. The modern nursery school owes much of its origin to these schools which have developed in England under the able leadership of Miss Grace Owen and Miss Margaret McMillan.

b. Present Conditions. Following the act of 1918 other nursery schools and training centers soon developed, but the progress of the schools has been limited greatly by lack of funds. An article by Miss Emma Henton describes present conditions as follows:

> Many of these institutions were established in slum areas and were recognized as at least one means of solving a difficult social problem. . . . Although the workers were keenly alive to the vital importance of an educational program for children of this age, their duties were so many and varied that most of the time they were acting as either nurses or social workers, cleanliness, fresh air and medical supervision being the main factors in a healthy régime. . . . A recent visit to a few of our English nursery schools revealed the teachers full of vision and enterprise, working against odds, with little or no sympathy or support from authorities, with

[12] McMillan, Rachel. "The nursery school in the Old Country." *Progressive Educ.*, 2: 1925, 22-25.

large groups of children, without adequate or trained help, and with very limited equipment.[13]

c. Influence of Montessori. Parallel with the development of the free kindergartens in England about 1907 was the work of Dr. Maria Montessori in preschool education in Italy. Her schools were established in tenement districts where the children of working mothers could be given proper care, and mothers be instructed in the health guidance of their children. The teaching materials are well known in this country as well as in England, but the influence of Montessori procedure upon nursery schools is more apparent in England than in the United States.

In the typical English nursery school the didactic materials of Montessori seem to occupy a prominent place. In the use of these materials and in the retention in the program of formal Froebelian practices such as the opening circle and devotional exercises the English nursery school is differentiated from the modern progressive kindergarten of the United States. Since both developments are contributing largely to the nursery school in this country, an increased interaction of the two programs seems to be a desirable outcome of the near future, when the best of American progressive kindergarten procedure may be merged with the best of English nursery-school theory and practice.

V. European Schools for Young Children

A glance at present-day practice in preschool education in different countries shows the extent of the movement and suggests the rapidity of the development of nursery-school education. Writing in 1925, Miss Emma Henton stated that twenty-five nursery schools were in operation in England at that time.[14]

There are no schools on the Continent which may be classified as nursery schools, but schools for children under five years of age are numerous. Dr. Mildred Mudgett, in making a study of "Legislation Affecting the Preschool Child in Certain European Countries," while holding a fellowship from the Social Science Research Council, visited many Continental schools during 1925-1926. In a

[13] Henton, Emma. "The nursery-school movement in England and America." *Childhood Educ.*, 1: 1925, 413-417.

[14] Henton, Emma. *Loc. cit.*

pamphlet issued by the Educational Office of the American Association of University Women she reports upon European schools for young children.[15] She presents the following information concerning schools in some of the leading countries of Europe.

1. Belgium

Educational work in Belgium is closely associated with the name of Dr. Decroly, who has been called "the John Dewey of Europe." Even in the field of preschool education, he has made his contribution. In his École de L'Ermitage he has a class of eighteen children between the ages of three and six. The work with these children emphasized sense training and habit formation in preparation for the Decroly method. All subjects in the curriculum are related in an important way to the needs of man and to his relation to society, and the same teacher carries one group of children through from the first grade to high school. . . .

It was surprising to find even three-year-olds going home for lunch, but they have two and one-half hours' recess, which permits a rest period at home before returning for the afternoon. Of course, these children all pay tuition and come from upper class homes. . . .

The Decroly ideas have not been confined to his own school, for some of the kindergartens as well as the higher grades in the Brussels public schools have adopted many of his methods. The kindergarten on Rue de Clef is an interesting contrast to some of the other public kindergartens in Brussels. One hundred and seventy children between the ages of two and six attend, of whom forty are under three.

2. Switzerland

When new educational ideas have been demonstrated in a private school and then incorporated in the public school system, such acceptance may be considered proof at least of their feasibility. In Geneva such proof on a large scale is found in La Maison des Petits which was started by the J. J. Rousseau Institute, but which has not become a public kindergarten. . . . Individual achievement records are kept according to a chart which outlines the child's intellectual development. . . . La Maison des Petits has more contact with the homes than many European schools through monthly visits of the teachers to the homes and through meetings with the parents where teaching methods are discussed.

3. Italy

Madame Montessori has until recently been a prophet without honor in her own country. Montessori schools have prospered in most

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[15] Mudgett, Mildred Dennett. *European Schools for Preschool Children.* Washington, D. C.: Educational Office of the American Association of University Women, 1927.

European countries except Italy. This situation was changed this year by Mussolini's decision that the famous educator had something to contribute to Italian education. She was invited to return to Milan in the spring of this year and give a six months' training course to one hundred and seventy-eight teachers, both religious and lay. Upon completing the course they will fill positions in both public and private schools.

4. Austria

The education of little children in Vienna is especially vital now, because the new municipal apartment houses which are being built for working classes are to contain kindergartens, and there is considerable rivalry between the proponents of Montessori and Froebelian methods as to which shall be used in these new schools. The Montessori proponents will not be prepared to furnish teachers until the present group of thirty students in the training school complete their two-year course. The Froebelian method predominates in the public kindergartens already in operation. The Board of Education is reported to be making a careful study of the whole subject before advocating any changes. If they make as thorough a study in this field as the Social Democrats have done in other fields involving the physical and mental care of young children, one may expect some very satisfactory efforts in preschool education in Vienna.

5. Germany

No study of the education of the European preschool child would be complete without a visit to the *Pestalozzi-Froebel-Haus* in Berlin where 350 students are preparing for kindergarten teaching. Eight hundred children between the ages of three and six form the classes for the practice teaching, which are located in different centers throughout the city. . . . In addition to the teacher's diary, individual records are kept of the children's progress. The family histories of the pupils are secured by the *Jugendamt,* the public department of child welfare.

Dr. Mudgett's report indicates a growing interest on the Continent in the education of preschool children.

6. Russia

The problem of the mother in industry is one which challenges social workers at all times. In Soviet Russia the program of preschool and parental education is progressing rapidly. In many ways the program is suggestive to leaders in other countries. Dr. Lucy Wilson, of the South Philadelphia High School for Girls, has made

a special study of the situation. In *The New Schools of New Russia*[16] she speaks thus:

Until the age of three, the child is the responsibility of the department of health. Characteristically, the care begins before birth with the release of the mother for a period of 12 to 16 weeks from all labor, with full wages. . . .

Much has been done and is still being done to educate the mother properly to care for her child. Mother-and-child posters are innumerable and widely distributed. Mother-and-child museums are numerous, well equipped, and much visited. . . .

As usual, in the Soviet Union, this work is carried on not only officially by the department of health, . . . but also coöperatively by trades unions, in factories, and by coöperatives in their store. Recently, special instructions have been worked out for the organization of Mother and Child Welfare Corners in Coöperative Stores. In addition to posters, there will be exhibited, in glass cases, samples of suitable dishes, underclothing, outside garments, shoes, toys, literature.

In connection with every trades union or state factory there are preschools for the education and care of the children of their workers. In addition to the *créche,* there are hearths and kindergartens and playgrounds for children of all ages to eight. These are financed from the culture fund of the factory, organized by the factory committee of the workers, but professionally supervised either by the Health Commissariat, for children under three, or by the Education Commissariat, for the older children. . . .

As it considers the preschool institutions as a means of freeing the working and peasant women from the enslavement of household cares and as a means of including them in the social life of the country, the Commissariat of Education gives particular attention to that part of its activity and strives to secure for the organization of the kindergartens, hearths, and playgrounds the collaboration of various municipal and rural authorities.

VI. Progress in the United States

The growth of nursery schools in the United States is discussed in some detail in Chapter VIII. Interest in preschool education as a necessary aspect of the broader educational program is general in this country. Unlike early infant schools and the English nursery schools, these schools for children three years of age and younger which have developed in the United States have been primarily for educational experiment, for demonstration of educa-

[16] Wilson, Lucy. *The New Schools of New Russia.* New York: Vanguard Press, 1928. Pp. 92-96.

tional methods or for purposes of research, and not for the relief of working mothers or neglected children.

The progress of preschool and parental education in the United States, while greatly influenced by earlier educational experiments in Europe, is also the result of many related social forces, which have developed in this country, for the most part, since 1890.

Attention to the physical care of children can be traced throughout the history of the preschool movement, following emphasis upon religious and moral education. Like other developments, the progress of the health movement has been irregular. During the past twenty-five years in this country there has been a steady growth of interest in the health problems of the normal young child. In the light of this development, the emphasis which the modern nursery school places upon the establishment of health habits can readily be understood.

Growing interest in child study has been another characteristic development which has contributed directly to the present movement in preschool and parental education. The influence of this interest has been most marked in the nursery schools of the United States and is basic in the organization of many modern parental education projects.

Appreciation of the necessity for coöperation between home and school has been steadily growing during the past twenty or thirty years. The influence of this trend upon the modern movement in preschool and parental education is evident.

A fourth development, of which the influence can be readily traced, is the mental hygiene movement. To keep a child physically healthy, while a worthy educational objective, is recognized as only one objective.

The importance of wise management of the home, with particular attention to the characteristic interests of the various members of the family, is a fifth development which bears upon the present status of the parental education and preschool movement.

Organized parental education efforts, representative of these five threads of interest, have developed rapidly in this country. Typical of such earlier developments, prior to the establishment of the first modern nursery schools in the United States, are the Child Study Association of America, the National Congress of

Parents and Teachers, the National Committee for Mental Hygiene, the American Child Health Association, and extension programs of Home Economics, conducted by Land Grant Colleges.

1. Growing Interest in Child Study

a. Child Study Association. The Child Study Association of America is a pioneer movement of outstanding significance.[17] The following extract from a statement issued by a representative of the Association sketches the origin and scope of its program:

The Child Study Association of America had its beginning in 1888, when an eminent leader in the new educational movement interested a group of mothers in studying the history and progress of education as it applied to their own problems of child training. Under his inspiration and guidance a group of three mothers came together, and continued to meet regularly throughout the year, to study and discuss the changes that had come about through the new contributions in child psychology, and the new methods in education that had evolved. The second year—1889—saw five mothers in the group and the work more systematically planned. A course of study was outlined and meetings held regularly each week from November to May. The work proved so stimulating and practical that thirty new members joined the group the following year, and the name, "Society for the Study for Child Nature," was adopted.

While there is record that in 1894 the Society was asked to help in forming a similar society in Montclair, New Jersey, the first real outgrowth was the formation, in 1896, of Chapter I of the Society for the Study of Child Nature. The organization of the second chapter took place in 1903. Other chapters were added, until in 1908 it seemed necessary to have a central organization which could serve as a headquarters for reports and as a medium for gathering and evaluating material, and for pooling resources to secure lectures and conferences supplementing the work of the study groups. It seemed most appropriate to call this the "Federation for Child Study," and it formulated its aims thus: "to secure, tabulate and distribute information concerning methods of child study and their practical application, to undertake original research, to furnish means of coöperation between societies having similar aims, and to conduct conferences and lectures." In 1924, the organization was incorporated under the name "Child Study Association of America." At the same time the Association's work was extended over a wider field—reaching many more groups both within and beyond the metropolitan area of New York City, training leaders in parental education to meet

[17] The present program of this Association is described more fully in Ch. X.

the increasing demand for leadership, and publishing pamphlet material and a monthly magazine.[18]

b. Program for College Women. During the last decade of the nineteenth century there appeared work done by a group of college women under the direction of Dr. Millicent Shinn.[19] The president of the Association of Collegiate Alumnae, in an address in 1893, described the project thus: "In the fall of 1890, steps were taken providing for the presentation of a plan by which those members who were interested could unite in a systematic study of the development of children, with special reference to securing the best basis for their later intellectual life. The special committee has studied the problem with diligence and care and has had the active coöperation of eminent specialists. The schedules for observations on child life, which have been prepared, are now ready for use, and it is extremely desirable that as large a number of careful and intelligent observers as possible should join in the study."[20]

Writing in the *Forum* for February, 1894, about the new field of child study, Oscar Chrisman said that among a number of societies which had been formed for the study of the child one of the two most promising was "the 'Association of Collegiate Alumnae' which has a 'section for the study of the development of children.' Mrs. Annie Howes Barns, of Washington, D. C., is chairman of this section, and the committee has issued a circular containing outlines of the work. A very pleasing notice in this circular is that 'Professor Preyer, of Berlin University, the leading specialist on this subject has offered to examine and return all six-months series of notes taken in accordance with directions . . . . and forwarded to him by the committee; and it is recommended that as many observers as possible avail themselves of the offer.' "[21]

This program of study was carried on intensively until well into the twentieth century. College graduates kept diaries, filled in

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[18] Quoted from a recent statement issued by the Child Study Association of America.

[19] Author of *Biography of a Baby* and other studies of children.

[20] Meek, Lois Hayden. "A preschool project for university women." *Progressive Educ.*, 2: 1925, 38-41.

[21] Chrisman, Oscar. "Child study, a new department of education." *Forum*, 16: 1894, 728-736.

the record sheets published by Dr. Shinn, answered numerous questionnaires, corresponded with child-study leaders, read and studied the wealth of child-study literature which was being published.

As the importance of child study began to wane, the interest in this program lessened. However, early in the recent development of preschool education, the interest was revived. In 1923, the American Association of University Women (once the "Association of Collegiate Alumnae") adopted as its main objective a program of study, rather than a program of action.[22] This program includes a study of preschool education, of public elementary-school education, and adolescent education. It aims to give college women a more objective and scientific understanding of children from birth through adolescence. It also aims to secure an evaluation of the agencies and methods used for the education of children. Through such study it is hoped that the methods of dealing with children may be improved in homes, in schools, and in other centers established for their education.[23]

Thus was inaugurated a project which has had a far-reaching effect on the preschool and parental education movement. Coming at a time when interest was slowly gathering, but when many were dubious and questioning, it has helped to inform an influential public. Moreover, it has built in many communities a group of women ready and anxious to coöperate in local work in preschool and parental education when it has been initiated. Through the dissemination of publications, not only among college women but among others as well, it has lent a guiding hand to new projects and ventures. But more important than all has been the education of college women to be better parents.[24]

2. Coöperation Between Home and School

The National Congress of Parents and Teachers is an organization which is unique in its purpose and program.[25] While the Child

[22] Comstock, Ada L. "An interpretation of the national educational program." *Jour. of the American Association of University Women,* 21: 1928, 90-92.

[23] Meek. *Loc. cit.*

[24] For a description of the present program of this Association in parental education, see Ch. X.

[25] For a description of the present program of this organization in parental education, see Ch. X.

Study Association provides a program of study for parents organized into small groups, the parent-teacher movement stresses the essential contact between home and school.[26] The purpose and organization of the Congress is described as follows:

The National Congress of Parents and Teachers—chartered under the laws of the District of Columbia—is a voluntcer organization. . . . On February 17, 1897, it was organized under the name of the "National Congress of Mothers" by a group of women led by Mrs. Theodore W. Birney and Mrs. Phoebc A. Hearst. The organizers, both men and women, were persons representing the philanthropic, religious, social, and political interests of the nation, who realized that while mothers have evcr been the leading factor in dctermining thc character of young children they have failed, lacking guidance and mcans of coöpcration, to exert the influencc upon the race which might be possible were conditions beyond the home brought under at least partial control. It was the original aim of the Congress of Mothers to secure such control and to carry mother-love and mother-thought into all that concerns or touches childhood in home, school, church, or state.

The work of the Congress expanded rapidly. Branches were organized in many states, and a magazine was cstablished (*Child Welfare*).

From the first it has been thc policy of the Congress to reach in a helpful and intimate way the two social institutions exercising the most direct influence upon young childrcn, the home and the school. To this end, it early entered upon a nation-wide campaign for the organization of parent-teacher associations. This movement proved popular and in order that it might be promoted and directed more effectively there was created within the Congress, in the year 1907, a special department in charge of this work, and the year following, the name of the organization was changed to the "National Congress of Mothers and Parent-Teacher Associations," to include this new phase of its development.

In 1924, owing to the rapid incrcase of the number of mcn interested in the movement, the name was changed to its present form, "The National Congress of Parents and Teachers."[27]

3. Physical Health Movements

a. American Child Health Association. Twelve years after the organization of the National Congress of Mothers, two national movements of great importance were inaugurated, the one dealing

[26] For a complete discussion of the history, purpose, and program of this association, see: National Congress of Parents and Teachers, *Parents and Teachers.* Boston: Ginn, 1928. pp. xv, 317.

[27] *The National Congress of Parents and Teachers—Its History, Organization and Program of Service.* Washington, D. C., 1927.

with the physical and the other with the mental health of children. The American Child Health Association, as now organized, is the result of the amalgamation in January, 1923, of the American Child Hygiene Association, founded in 1909, and the Child Health Association of America. The Association aims to bridge the gap between the research of the specialist and the immediate problem of the parent in the home and the teacher in the classroom. While the present organization of the American Child Health Association was not effected until 1923, the health movement which it sponsors was well under way prior to that time and should therefore be considered as an early force, influencing the present movement in preschool and parental education.

b. Children's Bureau. The health and infant hygiene movement has been greatly facilitated by Federal agencies. In 1912, the Children's Bureau was organized to study matters pertaining to child welfare and to make reports of investigations. The establishment of this Bureau can no doubt be attributed to public interest in reducing infant mortality and in safeguarding the health of young children.

c. Others. New York State, two years later, 1914, established the first State Department of Child Hygiene. In 1921, a Federal Maternity and Infancy Law, the Sheppard-Towner Act, was passed, making possible coöperation between the Children's Bureau and various state organizations.

4. The Mental Hygiene Movement

a. National Committee for Mental Hygiene. Parallel with the organization of the American Child Hygiene Association in 1909, the National Committee for Mental Hygiene was organized. While the original purpose was the care of insane adults, a study of their difficulties led speedily to a study of prison inmates and to case studies in the juvenile courts. From a consideration of the emotional problems of the delinquent, a program of methods of preventing delinquency was a logical step, and interest in the emotional needs of the normal young child the inevitable outcome.

b. Visiting Teacher. The Visiting Teacher Movement, begun in 1906, and organized in 1919,[28] may be considered as an in-

[28] Nudd, Howard W. "Contributions of the visiting teacher to child adjustment." *Progressive Educ.*, 3: 1926, 26-30.

dispensable aspect of the mental hygiene movement and also as contributory to the present program of preschool and parental education.[29]

5. Extension Work of the Land Grant Colleges

Prior to the establishment of preschool study groups for parents and to the widespread interest in the young child, home economics departments in land grant colleges throughout the country were engaged in programs of vocational homemaking through college curricula and extension courses. Because they had established contacts with women in the home and because they could offer materials which appeared to be immediately practical to the homemaker, home economics teachers have been able to pave the way for later developments more directly related to the present interest in parental education.[30]

VII. Development of Nursery Schools in the United States[31]

The establishment of pioneer nursery schools in the United States during the period 1919 to 1923 would seem to be the inevitable result of earlier developments in this country and in Europe. Influenced by all the forces previously mentioned, the nursery-school and parental education movements, since 1922, have become so closely interrelated as to no longer be considered independent movements.

The development of nursery schools has been so rapid that it is almost impossible to trace the influences which have been at work. One of the most outstanding characteristics of this growth has been the variety of avenues all of which have led to the establishment of nursery schools. Psychological research, home economics, educational methods and curricula, preschool clinics, professional careers for married women, philanthropy, and mothers' coöperative care of children are a few of them. It is significant, too, that

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[29] Williams, Frankwood. "The field of mental hygiene." *Progressive Educ.*, 3: 1926.

[30] A description of present extension programs in parental education is given in Ch. X.

[31] For a description and discussion of the nursery school as an educational agency, see Ch. VIII.

several of the pioneer nursery schools in this country came into being at about the same time. This was probably due to the many influences on child welfare already described, including the development of nursery schools in England following the Education Act of 1918.

1. Philanthropy

For the most part nursery schools which have been developing in the United States during the past eight or nine years differ from the English in that the philanthropic aims are not emphasized. However, one of the earliest nursery schools in the United States, one that is perhaps more like the English nursery school than most others in this country, the Nursery Training School of Boston (originally the Ruggles Street Nursery School and Training Center),[32] is like the English schools in being partially philanthropic in purpose.

"In 1920, the Woman's Education Association of Boston (for fifty years this organization has been instrumental in starting and furthering new lines of work in matters of educational importance) decided to start a nursery school along the lines of the English nursery schools. Because no one could be found ready to take charge of such an experiment, the Association sent Miss Abigail A. Eliot, the present Director of the Ruggles Street Nursery School, to England for six months to study the nursery schools there. The Ruggles Street Nursery School actually came into being on her return, January 1, 1922. It is under the auspices of the Woman's Education Association of Boston, and the committee in charge of its affairs is a committee of this Association."[33]

2. Research in Educational Curricula and Methods

The kindergarten-primary department of Teachers College, Columbia University, was early interested in the education of children below kindergarten age. In 1905, there was some discussion of taking over the educational work in a day nursery in New York City. This did not materialize, but the department did not lose

[32] For a detailed description of this school, see Ch. VIII.

[33] Gesell, Arnold. *The Preschool Child from the Standpoint of Public Hygiene and Education.* Boston: Houghton Mifflin, 1923. Pp. 52-53.

interest. In 1916, the courses in curricula and methods included consideration of children as young as two years. Finally, in 1919, the department sponsored a project of a group of parents to have their two-year-olds together in the morning. Sunny days found them in the park, but on rainy days they gathered in a room of the college. However, it was not until the spring of 1921 that the college authorized the opening of a nursery school under Kathleen Edwards, a teacher brought from England. That summer Miss Grace Owen gave a series of lectures at the college, and nursery-school education was established at Teachers College.

The first nursery school at Teachers College, operated in connection with the kindergarten department, was discontinued after the establishment in 1924 of the two nursery schools of the Institute of Child Welfare Research.[34] While the kindergarten department continued to use the nursery schools as laboratories for the training of students, curricular experimentation gave way to controlled research studies.

In 1919, the Bureau of Educational Experiments had opened a nursery school in the City and Country School in New York City. The purpose of this school was to study the growth needs of children in order to determine educational program, procedures, and materials.[35] "From the beginning the experiment was guided less by the past history of educational procedures and routines than by certain fundamental scientific facts and principles out of which methods could be evolved and by which they could be judged."[36]

3. Home Economics

About this time (1922) the first nursery school to be used as a laboratory for the education of young girls in the care and training of children was opened at the Merrill-Palmer School of Home-making in Detroit.[37] Following the leadership of this school other similar laboratories for child study and child care were opened in many home economics departments of land grant colleges.[38] The

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[34] For a detailed description of this school, see Ch. VIII.

[35] For a report of the first eight years' work in this school, see Johnson, Harriet M., *Children in the Nursery School.* New York: John Day, 1928.

[36] *Ibid.*, p. vii.

[37] For a detailed description of this school, see Ch. VIII.

[38] For a complete discussion of the development of preparental education, see Ch. XI.

first was at the Iowa State College of Agriculture and Mechanic Arts in the winter of 1924,[39] followed the next year by similar ones at Cornell University and at Ohio State University.

At the time of the opening of the nursery school at Cornell, the director made the following statement: "For several years child training courses have been given in the College of Home Economics at Cornell University, but the directors of the College appreciated that the approach through lectures only was largely theoretical. They were therefore anxious to develop laboratory facilities with a view to putting the whole project on a more practical basis."[40]

Probably the first nursery school for the use of high-school students of homemaking was opened at Highland Park, Michigan, in December, 1924.

4. Coöperation of Parents

A unique story about the organization of nursery schools is told by the Chicago Coöperative Nursery School. In 1915 a small group of wives of faculty members of the University of Chicago organized a coöperative nursery for the care of their young children. The aim of this original group of seven was to offer an opportunity for wholesome play for their children, to give the mothers certain hours of leisure from child care, and to try the social venture of coöperation of mothers in child care. Incidentally, it afforded an excellent opportunity for learning to understand their own children better.

The nursery was located in four rooms in a college hall until 1924, when building plans of the University necessitated a new arrangement. At that time money was raised to buy a three-story house with grounds bordering University property. At the same time the board of directors was incorporated and a ten-year working connection with the University established. The University provides maintenance, heat, light, janitor service, repairs, and decorations.

In 1927 an arrangement was made whereby an advisory committee was formed, composed of the president of the parents' association, a nutritionist from the home economics department of the

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[39] For a detailed description of this school, see Chs. VIII, X, and XI.

[40] Child Study Association of America. *Conference on Parental Education.* Bronxville, New York, 1925. P. 9.

University, and the head of the kindergarten department. Thus, a closer connection was made educationally with the University.

This is the oldest coöperative venture in the nursery-school field. Much of the credit for its long and continuous history is due to Mrs. David Stevens, one of the original seven mothers who still contribute loyal support and interest.[41]

As an outgrowth of the Ruggles Street Nursery School, the Cambridge Nursery School illustrates a different type of coöperative organization.[42] Mrs. Esther Schell, one of the parents active in the organization of the school, gives the following report:

In the winter of 1922 there were in Cambridge two groups of mothers, unknown to each other, who were attempting, somewhat feebly, educational experiments with their children of preschool age. I had in my own home four children in charge of a kindergartner for two hours every morning. The second group did not use a kindergartner; the mothers took turns acting as director. Members of both groups visited the Nursery School at Ruggles Street, in Boston, and were so impressed by what was being done there that they said, "Why can't we have the same thing for our children?"

During this winter, too, the Woman's Educational Association of Boston wished to try the Nursery School idea with a group of children from educated homes to see if it had general application. Miss Eliot, who is in charge of Ruggles Street, happened to know both Cambridge groups. At the same time word came from the McMillan School in London that a young nursery-school teacher wished to try some pioneering in the United States, and might be available for us. Miss Eliot called a meeting of the Cambridge mothers and after some deliberation we agreed to try a ten weeks' experiment. None of us knew anything about nursery schools. We felt that probably our four- and five-year-olds would not be harmed by it, and we watched very carefully to see what effect it might have on the younger ones.

The school started in a private house with the simplest equipment, with eight eager, anxious mothers and eight eager, happy children.[43]

The Coöperative Nursery School at Smith College was organized as a part of a larger program for women in connection with the Institute for the Coördination of Women's Interests.[44]

The Institute for the Coördination of Women's Interests was founded in July, 1925, at Smith College, with the purpose of finding

[41] Descriptions of this school have been published from time to time in the *Journal of Home Economics.* See 12: 1920, 72; 15: 1923, 423; 16: 1924, 646.

[42] For a detailed description of this school, see Ch. VIII.

[43] Schell, Esther S. "The independent nursery school," from the *Nursery School as a Social Experiment,* 1928. Smith College Publication.

[44] For a detailed description of this school, see Ch. VIII.

principles and methods for the continuity of women's individual, intellectual, or professional interests, in harmony with their family responsibilities. The early statements of the program and policy of the Institute brought out that the educated woman's present disuse after marriage of special powers which it has cost much in money, time, and effort to achieve, is an element of social waste, and a source of much personal regret, in some cases mounting to unhappiness. The central aim of the Institute was thus seen as an aim toward the conservation of valuable social material. . . .

It was clear that for the persons we had in mind—that is, women college graduates, relatively young, with family responsibilities, and with incomes in the professional or academic range—types of coöperative service or assistance in the household offered the most immediately fruitful field for study, for this reason: that such arrangements, if successful, gave, along with money saving and assurance of quality, a certain individual release from care or interruption which was the one great desideratum.

The reasons why the Coöperative Nursery School[45] was selected as the object of our first experiment were several. First, the theory and desirable forms of the nursery school itself were fairly well established; it was the object of warm and growing interest on the part of parents; and it offered good hope of a large extension of uninterrupted periods of time for the mother, and was therefore immediately within the purview of the Institute. It seemed, therefore, to offer a combination of practicability and usefulness as a first experimental demonstration in the field of household adjustments. . . .

The school may also offer limited opportunities for teacher-training, as its relation to the Smith College department of education becomes progressively closer. But it should be emphasized that these features are always limited by the original purposes of the school as interpreted by the parents' organization.

The element of research presented by the school is thus to be found almost wholly in its character as an experiment in the basis of coördination of women's interests.[46]

5. Research in Child Development

It is probably true that in the early history of nursery schools in the United States, research in child development was the result, rather than the instigation, of the organization of the nursery school. Such was certainly the case at Teachers College and at the Merrill-Palmer School. However, the interest in research was

[45] Organized in 1926.

[46] Howes, Ethel Puffer, and Beach, Dorothea. *The Coöperative Nursery School,* 1928. Smith College Publication.

the initiating motive which led to the organization of a nursery school at the University of Iowa. At the Iowa Child Welfare Research Station a preschool psychological laboratory was established in 1921.[47] This school as originally developed is not to be classified as a nursery school, since the founder, Dr. Bird Baldwin, organized groups of young children not for the purposes of demonstrating educational procedures nor of experimenting with methods of teaching little children, but for the maintenance of a constant group which could be observed daily under favorable environmental conditions for a period of several years. Following the preschool laboratory experience, children were observed in the demonstration school kindergarten and higher grades. However, the experience with children in the preschool laboratory led to the organization of a home laboratory or nursery school in 1925.[48]

Following Columbia University, Merrill-Palmer, and Iowa, each of the many institutes for child welfare research which have been organized during the past few years maintains a nursery school as a center for research in child development and parent education.[49] Perhaps the chief contribution of nursery schools organized in research centers is the opportunity offered for a wide range of investigations of childhood needs and characteristics.

6. Teacher Training

Pioneer work in the training of nursery-school teachers was done by Merrill-Palmer School, Ruggles Street Nursery School, and Teachers College, Columbia University. More recently normal schools and teachers colleges are manifesting a keen interest in the maintenance of nursery schools as centers for the training of students. Some of the teacher-training institutions have opened nursery schools not in order to train nursery-school teachers but in order to give students studying to be kindergarten or primary teachers an opportunity to observe and work with younger children. This is in line with the modern emphasis upon continuity in the education of children. The University of California at Los

[47] *Bulletin of the University of Iowa,* June 24, 1922.
[48] For a detailed description of this school, see Ch. VIII.
[49] For a more complete description of these research centers, see Ch. X.

Angeles, the National Kindergarten and Elementary College,[50] the Cleveland Kindergarten-Primary Training School of Western Reserve University,[51] and the public normal schools at Kalamazoo, Michigan, and Milwaukee, Wisconsin, have typical programs for the training of teachers through contact with the nursery school and the parents of nursery-school children.

7. Supplement to Clinics

The Play School for Habit Training, located in the North Bennet Street Industrial School of Boston, was the first nursery school to be opened as a supplement to a behavior clinic.[52] The objectives of this school are best described in the words of Grace Caldwell, the director:

> In November, 1922, we started at the North Bennet Street Industrial School an experiment in rehabilitation. Our subjects for repair were so tiny and our program sounded so serious that we were jokingly referred to in a newspaper writeup as "Boston's Newest Educational Venture, The Baby College." We have not felt justified in granting many degrees, but many of our little students have struggled hard to earn them. . . .
>
> As this reconditioning is our special problem, the children admitted to our 'College' are very carefully selected. In order to matriculate, each must present a record of temper tantrums, habitual grouchiness, thumb sucking, nail biting, enuresis, fears, jealousy or just bad adjustment of some kind. We believe that ours has been the only school to limit its group to problem children of preschool age. We do not call our experiment a nursery school, for our object is study and experiments in behavior problems. . . .
>
> The selection of our groups is now taken care of by admitting only children referred by the North End Branch of the State Habit Clinics.[53]

In connection with the Yale Psycho-Clinic a Guidance Nursery was opened in 1926. This is not a nursery school but an adaptation of the nursery-school idea to the needs of a service clinic. It is a device for the observation and guidance of young children and their parents. The nursery has no fixed enrollment. The organization

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[50] For a description of the Mary Crane Nursery School used by the National Kindergarten and Elementary College as a practice school, see Ch. VIII.

[51] For a description of the nursery schools of the Cleveland Day Nursery and Kindergarten Association used by the Cleveland Kindergarten-Primary Training School of Western Reserve University as practice schools, see Ch. VIII.

[52] For a detailed description of this school, see Ch. VIII.

[53] Caldwell, Grace M. "The Play School for Habit Training." *Boston Teachers News Letter,* January, 1928.

and program therefore differ from that of a nursery school. The guidance work is conducted on a dispensatory basis and the procedure is varied to meet the needs of individual parents or children. Its activities and attendance vary from week to week and from day to day.[54]

8. Liberal Arts Colleges

There has been a great deal of discussion during the past few years about the advisability of offering in the women's liberal arts colleges a curriculum for the woman who will become a homemaker. This has been due largely to the pressure of alumnae who married and found themselves with no specific preparation for homemaking and parenthood. Eva vom Baur Hansl has been one of the most ardent writers on the subject. In one article she says: "But what has all this to do with the Liberal Arts College? It is quite meet and proper that schools of Household Arts should concern themselves with questions of child training and feeding humanity, but why try to introduce these subjects into an undergraduate curriculum? There are a great many more or less violent expressions of opposition to any such modifications of the college curriculum as the inclusion of a nursery school as a laboratory on the campus might involve—opinions to the effect that the curriculum is sufficiently crowded as it is; the liberal arts college is no place for vocational courses; only 'pure' science should be taught in undergraduate courses, applied science belongs in the technical school curriculum; the function of the college is to train the mind and to instill a love of the great works and beauties of the past that are the very foundation of our civilization and through which and without which no comprehension of our civilization is possible, etc. But, are not most of these objections, in the last analysis a sort of rationalization based on prejudices against change?"[55]

Vassar was the first to heed the demand of its alumnae. Through the efforts of Mrs. John Wood Blodgett, the department of euthenics was opened at Vassar in 1923. During the summer of 1926 the Institute of Euthenics was initiated and a nursery school opened. This Institute aimed to give to women college graduates an oppor-

[54] For a detailed description of this guidance nursery, see Ch. VIII.

[55] Hansl, Eva vom Baur. "The child has invaded the college campus." *Journal of the American Association of University Women*, 20: 1927, 82-84.

tunity to learn more about children and homemaking. The nursery school was used as a laboratory for child study as well as a place for the children to be cared for while the mothers studied. It was not until 1927, however, that the nursery school was opened as a part of the pre-parental program of the regular college session.[56]

Mills College initiated work in preschool education by the opening of a nursery school in February, 1927. It was not until the following fall, however, that students began to use it as a laboratory for child study.

The nursery school at Smith[57] was initiated by the Institute for the Coördination of Women's Interests in 1926 as a demonstration of coöperative service among mothers. As such, it was of more significance for alumnae than for the students.[58]

In the year 1926-27 the Nursery School was conducted coöperatively by the Institute, the Parent's Group, and the Department of Education. After this year, the trustees of the college considered that the Institute had demonstrated the experiment, and the part played by the Insitute was transferred to the Department of Education. In the year 1927-28, the Nursery School was conducted by the Parent's Group and the Department of Education[59]

9. Kindergarten Interests

The history of the early development of the kindergarten shows very clearly that kindergarten education was really early childhood education. It is not surprising, therefore, to find that the kindergartners in the United States have taken a very active part in the nursery-school movement. Owing to the influence of Professor Patty Hill, of Teachers College, Columbia University, many kindergarten teachers have taken supplementary training to become nursery-school teachers. In many other places the kindergarten department has taken leadership in developing nursery schools. Such is the case at the University of California in Los Angeles, the National Kindergarten and Elementary College, the Cleveland Kindergarten-Primary Training School of Western Reserve Uni-

[56] The preparental program of Vassar is reported in Ch. XI.
[57] For a description of this nursery school, see Ch. VIII.
[58] For a discussion of the purpose of the Institute, see Ch. X.
[59] Howes, Ethel Puffer, and Beach, Dorothea. *The Coöperative Nursery School,* Smith College Publication, 1928.

versity. In the public schools of Kalamazoo, Michigan, a nursery school was organized in October, 1926, through the efforts of the kindergarten supervisor.

10. Montessori Influence

Since the work of Madame Montessori in Italy was with children three years old, the Montessori group in the United States, under the leadership of the Child Education Foundation in New York City, has taken an active part in the development of nursery schools.

Organized for purposes of educating parents, prospective teachers, and preschool children, the nursery schools of the Child Education Foundation vary from the typical English or the typical modern nursery school in the United States in that the program of Maria Montessori is fundamental in the organization.[60] Miss McLin, Director of the Child Education Foundation Training School, opened the first nursery school in 1915. "The aim of the Child Education Foundation is to study and serve the daily life of the child and especially the child of the pre-school age. It investigates, develops, demonstrates, and disseminates improved plans of child education. It prepares teachers and parents to carry on the work.[61]

11. Public Schools

The movement for the organization of nursery schools as part of public school systems has been slow in developing. This has been due in large part to the influence of leaders in the nursery-school movement. They have been desirous that the standards for health, nutrition, sleep, and outdoor play be safeguarded and that nursery schools should not be opened until adequate provisions could be made. In the Franklin Public School Nursery in Chicago an outstanding experiment has been made under the direction of Mrs. Alfred Alschuler. Opened in 1925, this nursery school has shown the possibility of adapting a typical public-school environment to the needs of preschool children.[62]

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[60] For a detailed description of a Montessori Nursery School, see the description of Bowling Green Nursery School, Ch. VIII.

[61] Bulletin of the Child Education Foundation Training School.

[62] For a detailed description of this nursery school, see Ch. VIII.

Another public school venture has been made in Los Angeles by the Board of Education and the Red Cross. The Normandie Nursery School was begun in 1926 under the supervision of the Department of Psychology and Educational Research.

12. Other Interests

Numerous other interests have led to the establishment of nursery schools. Of these, the nursery school maintained by the Rainbow Hospital for Crippled Children, in Cleveland, Ohio, is outstanding. The school was opened in the fall of 1923, supported by the Kiwanis Club. Because the little pupils were crippled, the procedure in the school necessarily varied from the usual type. A second unusual feature of this nursery school is the training of nursery maids.[63]

The nursery school of Antioch College, organized in 1926, is differentiated from the average nursery school by the fact that men as well as women students take advantage of the nursery school as a child-study center.

13. National Committee on Nursery Schools

One of the most significant characteristics of the development of nursery schools in the United States is this wide range of interests which have been and are influential in their organization. Such a breadth of interest cannot fail to be conducive to experimentation and open-mindedness towards technique and procedures. When all roads lead to Rome, Rome is necessarily a center of richness and knowledge which make for its own growth and progress.

The need for an exchange of ideas between these various groups was felt by one or two of the leaders in the nursery-school field. In June, 1925, twenty-five representative persons were invited to confer at Teachers College, Columbia University, on the advisability of some type of organization.

The desire expressed at that meeting of these varied interests to come together for discussion and exchange of ideas brought about the first conference of nursery-school workers. They met in Washington, D. C., in February, 1926. One day was devoted to

[63] Rainbow Hospital Report of 1925.

discussions of the various aspects of nursery-school education and to descriptions of outstanding projects under way. Many of those present believed that it would be most unfortunate for those concerned with nursery-school education to isolate themselves from those engaged in educating other levels of early childhood. There was expressed a keen desire for an organization which would integrate, rather than divide, all those who are in the field of early childhood education. A temporary organization was formed with a temporary chairman and secretary, and an advisory committee of some ten or fifteen persons. Later, this group met for a real workers' conference.[64] At that time the former organization was abandoned and the National Committee on Nursery Schools formed. This is a committee of not less than fifteen members representing various interests concerned in nursery schools. The committee is charged with the responsibility of making studies, calling conferences, and in other ways furthering progress in the movement for nursery schools.

VIII. Recent Developments

1. Conferences on Modern Parenthood

The publicity given by the Child Study Association of America to the parental education and child-study movement through the first Conference on Modern Parenthood, in October of 1925, has been a recent contributory factor of inestimable value. Not only is this historical conference to be considered as a potent force in spreading interest in preschool children; it is also a most illuminating sign of the times. The first of its kind, the conference was attended by 1500 persons, mostly parents, from every state in the Union. Comments of the press picture the conference most interestingly.[65]

> The modern mother, if we are to believe the popular novel and the scenario writer, is a pleasure-seeking, irresponsible creature who divides her time among bridge and dancing and 'parties' where the conduct is 'advanced'; while the modern father is even less of a father than he

[64] *Report of the Discussions at the Conference on Nursery Schools,* published by the American Association of University Women, Washington, D. C., gives an interesting account of these discussions.

[65] For a list of conferences which have been held on parental education, see Ch. X.

used to be. But the Conference on Modern Parenthood, held at the Waldorf-Astoria last week under the auspices of the Child Study Association of America, has framed quite a different picture; a renewed sense of parental responsibility and interest which has now reached the proportions of a full-fledged national movement. . . . Organized child-study groups have grown in numbers prodigiously within the past few years, and books on the care and rearing of children find a much more ready market. Business and professional mothers give their children of preschool age what they believe to be the more expert care and better material surroundings of the rapidly growing nursery schools. Whether modern parenthood will produce a finer race of men and women than the old-fashioned father and mother has yet to be demonstrated; but it seems to focus the present set of economic and social change.[66]

Much attention is deserved by the conference now holding at the Waldorf by the 600 members of the Child Study Association of America. The first large meeting of its kind in the United States, it marks a beginning of realization that children are proper objects of scientific research. The scientists, of course, cannot take the place of the mothers, but they can teach them many useful things and enable them to do intelligently not a little that they now do in accord with blind instinct or the advice of women no wiser than themselves.[67]

2. National Council of Parental Education

The Child Study Association the same year (1925) called a round-table conference of representatives of various agencies which were working in the field of parental education. This conference, financed by the Laura Spelman Rockefeller Memorial, brought together representatives of thirteen organizations. As a result, a National Council of Parental Education was formed. The first meeting of the Council was held one year later in Detroit, with fifty organizations represented.[68]

A recent development within the Council is the establishment in 1928 of a central office in New York City for the coördination of scattered projects in parental education.

3. Field Service in Parental Education for Home Economics Departments

The program of the American Home Economics Association is of outstanding importance in the recent growth of the movement

[66] Editorial, The New York *Times,* November 1, 1925.
[67] Editorial, The New York *Times,* October 29, 1925.
[68] Published reports of the Child Study Association of America: Conference of Parental Education (Bronxville) and report of the year 1926-27.

in preschool and parental education. Within the last ten years home economics education has enlarged its point of view from training in techniques of housekeeping to that of homemaking, with an increased emphasis on the care and training of children and family relationships.[69] The early efforts for modification were merely the introduction of theoretical courses on child care, limited almost without exception to the physical care of children. This was followed by the placing of a baby in the home-management cottage. Thus, a limited experience in the physical care of a baby could be obtained. Later, with the introduction of a nursery school, a laboratory was provided for the directed observation of preschool children and for a study of all the aspects of child development. The Merrill-Palmer School was largely responsible for a stimulation to incorporate these courses into the home economics curriculum. It provided a pattern or method of teaching child development that was adaptable.

In summarizing the achievements of the two years, 1924-26, in improving home economics curricula, mention is made of the inclusion of a course in economics of the home, organization of courses on social relationships of the family, and formulation of a child development and parental education program in home economics departments of elementary, secondary, and collegiate schools.

Since 1924 a course in social relationships of the family has been organized for students of home economics in certain regular and senior high schools. The status of this subject in the home-economics curriculum until within recent years was similar to the subject of economics of the home—namely, that smatterings of it were offered in a number of other courses. But the increasing number of divorces and broken homes has led home economists to realize that the study of human relationships is as important as the one concerned with home activities, and that home economics has a worthy contribution to make to the social relationships of the members of the family and in turn will help raise the standards of home and family life.

The objectives of such a course are to develop in the high-school girl certain family ideals, a finer sense of appreciation for the more cultured things in life, a sense of responsibility for her relationships to the rest of the family, a personality which will help raise the standard

[69] For a complete discussion of present status of preparental education with special reference to home economics, see Ch. XI.

of the family morale, and a higher degree of home contentment, home interest, and a home-loving attitude.[70]

Even so, the courses in child care played an insignificant part in the curriculum of most schools; one quarter, or one semester of a four-year course, was the usual time allowed for this subject. Yet, with this apparent lack of interest, the demand far exceeded the supply of qualified teachers. Many times the instructors were only trained in the technique of housekeeping and the science of foods and had little or no knowledge of children.

This interest in child-study courses with its accompanying criticisms was not restricted to the academic group but was shared by the extension and vocational departments.

In order to remedy many of these conditions, to meet these criticisms, and to provide a means whereby all interests in home economics education might profit by the isolated experiments and realize the need for placing the proper emphasis on child development, a committee of the American Home Economics Association decided that a study should be made of these courses and programs. Accordingly, in the fall of 1926 the American Home Economics Association appointed a field worker in child development and parental education to organize and direct a four-year program which would aid the schools and colleges in the establishment of their child-development courses and which would promote and strengthen this important phase of homemaking. The purpose of this office is to determine how home economics can best serve in the movement for child development and parental education and to establish a consultant service in this field.[71]

5. Training of Leaders[72]

Growth in interest in preschool and parental education has been so rapid that it has not been possible to train leaders in sufficient numbers to fill the demand for teachers, investigators, field leaders, and leaders of parental groups. Yet through the awarding of annual fellowships to women of established ability in the field

[70] Whitcomb, Emeline S., *Achievements in Home Economics Education.* Bulletin, 1927, No. 35, Department of the Interior, Bureau of Education.

[71] *Bulletin American Home Economics Association,* October, 1927.

[72] For further discussion of the training of leaders, see Chs. XII, XIII, and XIV.

of education it has been possible for various colleges to undertake the training of leaders in child development and parent education. Various institutes of child welfare research have been established in schools and universities through the generosity of the Laura Spelman Rockefeller Memorial. The Merrill-Palmer School of Homemaking in Detroit, Teacher's College of Columbia University in coöperation with the Child Study Association of America, and the Child Welfare Institutes in the Universities of Iowa and Minnesota are now training many of the leaders in parental education.

These institutions also provide centers for various phases of research in child development. Among other significant research training centers are Cornell, Yale, Johns Hopkins University, the University of California, the University of Cincinnati, McGill University, the University of Toronto, and the Washington Child Research Center recently (1928) established in Washington, D. C.

IX. Summary of Contributing Factors

Although present-day nursery-school and parental education appears to have developed through many and varied sources, the most significant of the contributing factors may be summarized briefly:

1. The movement in preschool and parental education is not purely modern, because the educational theory of the present is the outcome of the thought of leaders in education during many years.

2. The nursery school and the kindergarten have a common origin in the early infant schools of England and the continent.

3. The English nursery schools of the past decade, Froebelian kindergartens, Montessori schools, and progressive kindergartens interact in the development of the modern nursery school.

4. In the United States typical social developments which are merged in the nursery-school and parental education program are the movement for improving child health, the growth of interest in organized child study, closer coöperation between home and school, the mental hygiene movement, and the widening program of home economics education in state institutions.

5. Recent programs which constitute distinct phases of the movement are as follows: Child-study groups organized among

University women under the guidance of the American Association of University Women, the development of child-study conferences and the National Council of Parent Education initiated by the Child Study Association of America, the enlargement of the scope of home economics through the child-development program of the American Home Economics Association, the awarding of fellowships in child development and parental education in order that leaders might be trained, and the establishment of child welfare research institutes in various educational centers of the country.

6. Nursery schools as developed have many common objectives, but still somewhat varied purposes. Very few nursery schools in the United States are philanthropic in purpose. Practically all aim to serve as a supplement to, rather than as a substitute for, the home.

7. Typical among the main objects of modern nursery schools are: to provide opportunities for controlled research, to establish experimental laboratories for the study of educational methods, to furnish facilities for training preschool teachers, to provide for the cultural and general training of college women, to train teachers of home economics, to demonstrate best methods of child care, to permit parents to participate in the group care of little children, and to train junior and senior high-school students.

The Play School for Habit Training of the North Bennett Street Industrial School, the nursery school for crippled children at Rainbow Hospital, the Montessori nursery schools of the Child Education Foundation, and the Guidance Nursery at Yale are interesting instances of more or less specialized types of nursery-school undertakings.

CHAPTER III

GENERAL CONSIDERATIONS UNDERLYING PRESCHOOL AND PARENTAL EDUCATION

The purpose of education in its broadest sense is the providing of a suitable environment for the complete development and growth of children. This implies that education begins at birth, for growth, from that moment on, may be affected by the environment. Such a conception of education also means that the first six years of a child's life, the preschool years, are particularly significant because of the important development which is taking place and the influence upon later years of the growth during these years.

This statement does not imply that the years from six on are unimportant educationally. Neither does an emphasis upon the significance of the learnings which take place during preschool years mean that nothing is added or gained later. It is true that "none but a fanatic could go so far as to say 'Give me the child until he is seven and I care not who has him afterward.' On the contrary, we are deeply concerned as to who has him afterwards, and rightly so, as experience proves that the child can be modified for better or worse in all succeeding periods."[1]

I. Significance of the First Six Years

The first six years of a child's life, though inseparably bound up with the nine months of prenatal growth and the later years of childhood and adulthood, may be conveniently taken as a unit for study and consideration. At the sixth year, the appearance of the first molar is a landmark of biological significance, while formal entrance into the first grade makes it an important age educationally.

From a developmental standpoint it has been recognized that these are the most important years of childhood. As one author puts it:

For perspective we must grant, at the outset, that the preschool period exceeds all other epochs in developmental importance. This

[1] Hill, Patty Smith. "First steps in character education." *Childhood Education,* 3: 1927, 355-359.

period occupies approximately the first seventy months of the scriptural allotment of seventy years—only one clock hour, reckoning the entire span of a human life as a day. But during that hour the major portion of the total stream of development flows under the bridge. This statement holds true even if, with Huxley, we make life and development co-extensive terms. In a biological sense, at least, the first period of development must outrank all others in the wealth of phenomena displayed.[2]

Furthermore, the fact that the preschool period is the first period in a child's life gives to it the importance which comes with primacy. All experiences which a child has later are built upon, or developed from, these earlier experiences. Dr. Gesell says, "The earliest periods of development are always the periods of most rapid, most intense, and most fundamental growth."[3]

1. Studies in Child Development

There is no evidence of the importance of the early years of childhood so convincing as the recent studies which have been made by specialists in the various phases of child development.

a. Physical Growth. Particularly significant are the data for physical growth. "The very laws of growth make these the most formative of all years. The younger the creature, the more rapid its growth. When measured by percentage of increment in weight and height, the growth activity of the first six years is incomparably greater than that for any subsequent period of six years."[4]

According to the findings of Dr. Richard E. Scammon, one of the outstanding students of anatomy, the most active period of physical growth is during the ten lunar months preceding birth and the two years following birth. "Thus from birth until about two years there is a period of extremely rapid growth comparable in some degree with that seen in fetal life. This rapidly decreases, however, and from two to ten years the rate of growth is slow and constant, being so nearly uniform that this phase of the curve is almost a straight line."[5]

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[2] Gesell, Arnold. *The Mental Growth of the Pre-School Child.* New York: Macmillan, 1925. P. 4. (By permission of the Macmillan Company, publishers).

[3] *Ibid.*, p. 10.

[4] Gesell, Arnold. *The Pre-School Child from the Standpoint of Public Hygiene and Education.* Boston: Houghton Mifflin, 1923. P. 3.

[5] Scammon, Richard E. "Recent work on the physical development of children." *Second Conference on Research in Child Development.* Committee on Child Development, Division of Anthropology and Psychology, National Research Council, Washington, D. C., May, 1927. P. 10.

The fact that the early years of childhood are years of extremely rapid growth and that during this period there is a high susceptibility to disease infection makes preventive medicine, proper nutrition, and hygienic régime indispensable for maximal physical development.

b. Mental Growth. Equally important and rapid is the mental growth which takes place during the first six years. The studies of Gesell, Watson, Baldwin, Woolley, and others point to the fact that the preschool years are filled with learnings.

There is no better way of realizing the extent of mental growth than to compare a new-born babe with a six-year-old child.

From his initial squirmings and unorganized movements the infant gradually learns to focus his eyes, to reach for an object, to grasp, to hold, to carry to his mouth, to shake, to throw, to build, to cut, to make, to sew, to hammer, to saw, to handle, and in short to manipulate most of the things in his own environment to his own satisfaction. Before school age he has grown in postural control from a helpless infant to a sitting, crawling, walking, running, jumping, hopping, skipping, dancing, climbing, and sometimes swimming child. To his first experiences in tasting, feeling, hearing, and seeing he adds multitudes of later experiences which gradually build for him a simple and usable understanding of most of the things in his environment. The knowledge which he thus accumulates will depend not only upon the number of experiences and the variety of objects encountered, but also upon the fullness and richness of these experiences.[6]

c. Language Development. During this period language develops from the initial birth cry to a large vocabulary of words. A recent study shows that the average vocabulary for six-year-olds is 2,562 words, with a range of from 1,620 to 3,340 words.[7] Other studies have given figures as high as 6,837 words at five years[8]

[6] For an excellent example of this see Arlitt, Ada Hart, *Psychology of Infancy and Early Childhood.* New York: McGraw-Hill, 1928. Pp. 124 ff.

[7] Smith, Madorah Elizabeth. *An Investigation of the Development of the Sentence and the Extent of Vocabulary in Young Children.* Iowa City, 1926. (University of Iowa, Studies of Child Welfare, Vol. 3, No. 5.)

[8] Gerlach, Fred M. *Vocabulary Studies.* (Reported study made by Langerbeck), 1927. (Colorado College, Studies in Education and Psychology, No. 1).

and 4,616 words at six.[9] From mere babbling and vocal play words, word combinations and sentence forms are developed step by step.[10]

"The language progress which a child makes from three years to five years of age is typified by his ability to use prepositions appropriately, his employment of descriptive words, and his tendency to deal with larger units of thought, his ability to bring clauses and sentences into logical relation both in imaginative and in practical narration. Indeed within his limits he becomes an entertaining raconteur, whereas four years earlier he was unable to articulate a single word."[11]

d. Habits. The acquisition of routine habits and of adjustments to family life and group living are also significant indications of the developmental importance of these early years. Habits of feeding, of elimination, of toilet, of washing, of dressing, of going to bed and getting up, are well fixed by the time of school entrance. It is during this period that the parent-child relationship is set up. Whether it is to be one of over-dependency of child on parent or one of increasing independence and control for the child, whether there is intelligent sympathy or indulgent sentimentality, will depend upon the attitudes of the parents. Whether there is a feeling of comfortable security or of insecurity, whether a love for brothers and sisters, for father and mother, or jealousy and antagonism, will greatly be influenced by home conditions during the early years.

e. Emotional Adjustments. This is the age when anger, tantrums, stubbornness, negativism, nausea, and a host of other mechanisms are acquired to thwart adults and overcome inhibitions to desires. Continual inhibitions to natural, wholesome activity by adults, or, on the other hand, repeated success of such methods of evasion by children as listed above, develop personality traits in these early years which are difficult to eradicate later.[12]

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[9] Davis, David E. *Vocabulary of a Child,* unpublished master's thesis, 1927. This is a three-year study of a child with I.Q. ranging from 130 to 135.

[10] Stern, William. *Psychology of Early Childhood up to the Sixth Year.* New York: Holt, revised edition, 1924. Pp. 172 ff.

[11] Gesell. *Op. cit.,* p. 221.

[12] Arlitt. *Op. cit.,* pp. 90-93.

On the basis of a very few fears at birth,[13] fears rapidly multiply during the preschool years. "The preschool period is of all periods the most prolific for fear."[14] Although many of these fears may be inconsequential and soon pass away, they often indicate a definite trend of personality which will take intelligent guidance to save from serious handicaps for wholesome living.[15]

This is the time also of earliest experiences in matters of such biological and social importance as sex. The early curiosity and investigations of the organs of the body, the introduction to the phenomena of birth of animals and of babies, make this an important period for building wholesome attitudes and correct information about reproduction and sex.[16]

The studies of the behavior of children during the first 72 months of life give a wonderful picture of rapid learning and manifold activity. They are convincing evidence of the fact "that the preschool period exceeds all others in developmental importance."

II. Aspects of Child Life Particularly Influenced by Parents

During the preschool years so pregnant with learning, the life of the child is entirely in the control of his parents. Born with a certain inherited make-up, what the child becomes within the limits imposed by inheritance is dependent not only upon the love and affection, but also upon the intelligence and understanding of those adults whose responsibility it is to guide him. If the family delegates this care of the child to servants, to day-nursery matrons, to nursery-school specialists, to kindergarten teachers, for all or any part of the day, the responsibility still rests on the shoulders of the parents who do the delegating.

1. Home Environment

a. Home Atmosphere. The home environment has a great influence on child life in its general atmosphere as well as its equip-

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[13] John B. Watson in *Psychology from the Standpoint of a Behaviorist* states that in observing babies two situations brought forth fear during the first days after birth: a loud noise and removal of support.

[14] Gesell. *Op. cit.*, pp. 229-230.

[15] Arlitt. *Op. cit.*, pp. 82-95.

[16] For more complete discussion see *Parents and Sex Education* by Benjamin C. Gruenberg. New York: American Social Hygiene Association, 1923. Pp. vi, 100.

ment. The underlying conception of the purpose of the home worked out consciously or unconsciously by the homemakers determines in large part what the home will be. The relationship between parents is fundamental: whether they have a unified purpose toward which they are working; whether there is respect for the contribution which each has to make, for the opinions and desires of each other, for the inalienable right of each to live life fully and richly; or whether there is lack of unified purposing, domination, callousness to other's desires, continual strivings and absence of wholesome adjustments. "An inarticulate conflict between parents, and between interests of child and adults, may express itself in sickness, nervous disorders, temper, running away, stealing, assaulting, setting fires and other acts of a criminal nature in young children."[17]

The parents who can work out an equitable arrangement with each other usually have the right attitudes toward their children. The same principles of human relationships which apply between husband and wife apply also to parents and children. The parent who conceives his function in regard to his children to be that of a wise guide who protects when necessary, gives help where it is needed, but looks forward to the complete emancipation and freedom of his followers as quickly as independencies can be gradually and intelligently established, builds up a home which will bear fruit in strong, wholesome children. "In the true 'democratic' family, the family where biological requirements of each member are understood, there is neither delinquency nor conflict. There is balance, an intraction of forces, a 'peace between equals.' "[18]

b. Home equipment. In the selection and furnishing of the home, the parents have an opportunity to put there such things as will be stimulating or which will be inhibiting to child growth. Whether the home shall be in a house or in an apartment, the amount of space indoors and out which is available for child play and child use, sunlight, ventilation, heating, all are questions which many parents might decide differently if they had a better understanding of child welfare. The selection of furnishings for cultural, aesthetic, or useful purposes also determines the early influences

[17] Van Waters, Miriam. *Youth in Conflict.* New York: Republic, 1925. P. 75.

[18] *Ibid.*, p. 86.

of this nature which shall come into a child's life. Finally, the playthings, the materials for motor activity, creative expression, dramatic play, and informative experiencing are the selection of parents, and much of the daily activity as well as the emotional poise of the preschool child will depend upon their basis of selection of his playthings.

2. Physical Development and Bodily Habits

During these early years, the mother is responsible for the physical development and bodily habits of her child, whether this be due to his nutritional conditions, his sleep habits, his habits of elimination, his cleanliness, the clothes he wears, or the regularity of his daily régime and his bodily habits.

3. Self-Service Habits

It is to parents also that we must look for the building of certain self-service habits, such as washing, dressing, caring for toys, helping in housekeeping tasks, and taking care of oneself on the street. These activities are filled with interest and joy to a little child. The parent who satisfies this interest by giving adequate opportunity and guidance in doing such self-service acts makes a genuine contribution to her child's development in motor control, independence, and coöperation. "The degree of general motor ability a child has depends in large measure upon how many things he has been allowed to do at home. The wise mother allows the two-year-old to pull off his own clothes, to try to put them on, even though they go on backward and upside down, to feed himself, even though he does some spilling, or occasionally breaks a dish."[19]

4. Activities of Children

Another way in which parents influence the development of young children is through their control of what children do. The daily régime, so important to physical and mental health, is planned by the mother. Even play activities in the home and the home playground are often determined not only by the space and playthings

[19] Woolley, Helen T. "Before your child goes to school." *Children, The Magazine for Parents,* 1: 1926, 8.

but also by the emotional make-up of parents. A nervous, fidgety mother who can't stand noise or who is full of fears of what may happen to her children; a mother who considers a spic-and-span house of more value than child activity; a father who wants quiet and must not be disturbed; these are only some of the types which, through their inhibition of child activity, are interfering with wholesome development. Moreover, where a child goes, the kinds of excursions he has outside of the home, the companions he plays with, and the conversation he takes part in are all experiences affecting his development which are controlled by his parents.

5. Language Habits

Educators have long realized that a child's language habits—his grammar, his vocabulary, his pronunciation, and perhaps even the pitch and timbre of his voice—are largely set in his home. "The language learned first is the language learned best. . . . . The child carries through life not only the language of the group in which he is reared, but also, to a certain extent, the language of the individual who cares for him most constantly through the first years of life. If this person is his mother, he is likely to have the accent of his mother. If it is someone else, than her dialectic sounds will color it. It is very important, therefore, that the first nurse, or the first person to handle the child, should be selected to a certain extent from the point of view of purity of accent."[20]

"Children learn words not by instinct, or by mere growth, but by being talked to and read to, by having new experiences which demand the learning of new words, by being encouraged and stimulated to express themselves. Very little children who live in a silent adult atmosphere, who are laughed at when they talk, who are suppressed and made to keep silent a great deal, who are not read to early, are at a disadvantage in learning words. Most children could learn, easily and with joy, more words than they do before they enter school.[21]

6. Emotional Development and Personality Traits

Even more significant is the influence which the home and parents have upon the emotional development of children. Most of

[20] Blanton, Smiley, and Blanton, Margaret Gray. *Child Guidance.* New York: Century, 1927. P. 98.

[21] Woolley. *Op. cit.*, p. 9.

the fears which interfere with normal adjustment to life are built up during these early years. Dr. Watson has shown by experiments with infants how easily fears may be acquired upon the basis of the two situations which cause a fear response at birth: a sudden loud noise, and removal of support.[22]

During this period also children are learning how to adjust themselves to necessary obstructions to their desires or learning to use the instinctive response of anger in order to remove the obstruction and thus get what they want. It is then that temper tantrums are seized upon as a means to gain desired ends and become fast fixed in personality if they are successful.

Important also is the influence of parents on the affective life of preschool children. Children readily learn to respect, to have confidence in, to seek sympathy from, to want affection from, parents who love wisely. Unwise parents may, on the other hand, by too much display of affection, by unwholesome yearning, develop a child who has no independence, who cannot be content with other people, who cannot live happily with children of his own age, who, in short, is "tied to his mother's apron strings" not only for childhood but for life. Another home may be lacking in affection and sympathy to such an extent that habits of self-abuse, feelings of inferiority, resentments, and jealousy may become a dominating part of a child's personality.

At this time in a child's life he seems particularly susceptible to influences on his developing emotional make-up. Likes and dislikes, prejudices for and against things, persons, and ideas subtly become part of a child's character through living with parents with similar likes and dislikes.[23] Such fundamental traits as attitudes toward problems which he meets, toward authority of parents or community or ideas, toward reality itself, have their beginnings in the experiences which a child has in his home during the preschool years.

7. Social-Moral Development

The beginnings of one's attitudes toward others, of the recognition of mine and thine, of the respect for other people's rights and

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[22] Watson, John B. *Psychology from the Standpoint of a Behaviorist.* Philadelphia: Lippincott, revised edition, 1924. Pp. 231-236.

[23] Gruenberg, Sidonie M. "Twigs of prejudice." *Survey Graphic,* 9: 1926, 586-588.

privileges, are made in the preschool years. It is in the home, in his living with mother, father, brother, and sister, that he gets his first lessons in give and take, live and let live. "His conceptions of truth and falsehood, of possession and non-possession, of the real and the imaginary, all have their inception in the first few years. He gets a set which is a large element in determining whether he is to be fundamentally truthful, fundamentally honest, and capable of facing and dealing with reality, even when it is unpleasant. It is the atmosphere of the adults about him, their own ability to deal successfully with reality, which has the most profound effect upon the little child."[24]

It is true that all of these adjustments which we classify as social adaptations are very complex habits which mature only with age and manifold experiences.[25] But if right beginnings are made in the home during the preschool years, positive foundations will be laid, and much re-educating may be avoided.

Parents, then, have a large share in the preschool development of children through the home environment, the physical hygiene régime, the activities of children, the opportunities for the establishment of self-service and language habits, and the influences on emotional and social-moral development. It must be recognized that often the parents are unconscious of the influences they exert on the growth of their children. They do not realize the significance of the things they do nor their bearing on the character of their children.

III. Influence of the Home As Shown by Recent Studies

If parents have such a fundamental part in influencing the development of children, it is essential that we know how well they are meeting these responsibilities. During the past ten years there have been many surveys and studies which give a picture of the situation. Outstanding among such studies are the conclusions of certain health surveys.

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[24] Woolley, Helen T. "The social consequences of the neglect of mental hygiene in young childhood." *Hospital Social Service,* 11: 1925, 9.

[25] Judd, Charles H. "Early emotions and early reactions as related to mature character." *Childhood Education,* 3: 1927, 348-354.

1. Health Surveys

a. Mortality. It is almost unnecessary to mention the great mortality in these early years. Over one third of all the deaths in the United States occur below the age of six years. Ten times as many deaths occur in the first half decade of life as in the full decade from five to fifteen years.[26] Many of these deaths are due to the fact that the human body increases its resistance to infection with age: "the younger the patient, the worse the prognosis in all the diseases of childhood."[27]

b. Physical Defects. For the children who live, there is less than fifty percent chance that they will complete the preschool years sound in body. A report of a study of 1,027 children under school age in New York City showed that only 481 were normal; 200 had teeth defects only, and 458 had other defects.[28] The defects found were:

Defective vision	5
Defective hearing	3
Defective teeth	212
Defective nasal breathing	141
Hypertrophied tonsils	199
Malnutrition	215
Cardiac affections	12
Pulmonary disease	6
Orthopaedic affections	32
Nervous affections	9
Hernia	3

In a later study (1921) of 1,061 children of preschool age, 33.3 percent were found to be normal, 25.2 percent with teeth defects only, and 41.5 percent with other defects requiring treatment, such as hypertrophied tonsils, defective nasal breathing, malnutrition, pulmonary disease, organic cardiac, and orthopaedic defects.[29]

Even more telling are the findings of a study of the physical status of 3,125 preschool children in a typical American industrial center,[30] in which over 60 percent of the children had foreign-

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[26] Gesell, Arnold. *The Pre-School Child from the Standpoint of Public Hygiene and Education.* Boston: Houghton Mifflin, 1923. P. 4.

[27] *Ibid.*, p. 6. See also Baker, S. Josephine. *Child Hygiene.* New York: Harper, 1925. P. 257.

[28] Baker, S. Josephine, *Op. cit.*, p. 225.

[29] *Ibid.*, pp. 255-256.

[30] Rude, A. E. *Physical Status of Preschool Children, Gary, Ind.* Washington, D. C., 1924. Children's Bureau, U. S. Department of Labor, Publication No. 11.

born white mothers, and in which only 149 children were found without defects. The diseases or defects of the other 95.2 percent were as follows:

	Children
Underweight	303
Anemia	243
Head	151
Eyes	890*
Ears	295†
Mouth	2,091
Naso-Pharynx	2,159
Glands	908
Heart	99
Lungs	32
Skin	318
Abdomen	464
Bony and muscular system	1,308
Nervous system	75
Genitalia	769

* 1,081 children were not tested.
† 1,279 children were not tested.

There was an average of 4.2 defects per child. This average increased steadily for the various age groups. Two-year-olds had on an average 2.7 defects, whereas six-year-olds had 5 defects. Conversely, the proportion of children having no defects decreased from 15.11 percent at the two-year level to 0.3 percent at the six-year level.[31]

The most conspicuous single defect in the entire group was carious teeth.

Almost 15 percent of all the children examined had defects which were the result of rickets, yet rickets is considered to be a disease of infancy and its symptoms readily disappear under proper hygienic and dietary care. It is safe to conclude that the proper corrective measures of diet, hygiene, and environment had been applied to relatively few of these preschool children. "This conclusion is perhaps further substantiated by the fact that these defects showed no tendency to diminish, even in the older children, but increased steadily."[32]

c. Nutrition. Many surveys have been made of the nutritional condition of school children by means of physical and medical ex-

[31] Rude. *Op. cit.*, p. 30.
[32] *Ibid.*, pp. 58-59.

aminations, as well as through dietary studies.[33] They have all revealed a large percent of undernourished school children. Fewer studies have been made of children before school age, but all of those available give similar evidence. In the two studies we have quoted from Dr. Baker, approximately one fifth of each group of children were suffering from malnutrition. The most striking evidence of the need for better nutritional care of preschool children is to be found in the study of 6,015 children between the ages of two and seven in Gary, Indiana.[34] This study was made in coöperation with the study of "The Physical Status of Preschool Children" by Dr. Rude, already cited. In addition to the medical examinations given to 3,125 of the children, a visit was made by a trained worker to the home of every child between the ages of two and six years. Information was thus obtained concerning diet, hygiene, and the general living conditions of each child. Only 18.6 percent were found to have excellent nutrition. Nine and seven-tenths percent were 10 percent or more underweight, and 7.8 percent were plainly anemic.

Dr. Roberts calls particular attention to those physical defects most closely related to nutrition, such as defects of bony or muscular system (41.8 percent), defects of rachitic origin (14.9 percent), postural defects (25.4 percent), decayed teeth (64.7 percent), malocclusing teeth (11 percent), nasopharyngeal defects (69 percent), defective tonsils (52 percent), and adenoids (33.6 percent).

But the most outstanding evidence of the need of nutritional care was furnished by the diets of the children. A large majority of the children were not being given food that constituted an adequate diet for normal growth. There were, in fact, not 10 percent of all the six thousand children who had an adequate diet. Two-thirds of them had diets lacking in one or more essentials. Over half the children had no milk to drink, while only 18.9 percent were getting the pint of milk which is almost universally recommended as the desirable minimum. Other essential foods, such as fruits, vegetables, and eggs were lacking in over 50 percent of the cases

[33] For a summarizing table of 33 such studies see Roberts, Lydia. *Nutrition Work with Children.* Chicago: University of Chicago Press, 1927. Pp. 8-9.

[34] Roberts, Lydia. *Children of Preschool Age in Gary, Indiana, Part II. Diet of the Children.* Washington, D. C., 1925. Children's Bureau, U. S. Department of Labor, Publication No. 122. An excellent summary of this study will be found in Roberts' *Nutrition Work with Children,* pp. 328-330.

(60.1 percent had no fruits; 59.5 percent had no eggs; 50.4 percent had no vegetables). Nearly as large a number (45.5 percent) lacked as many as four of the foods usually included in a child's diet—milk, eggs, vegetables, potatoes, fruit, cereal, meat.''[35]

It was also found that the general régime of the family and habits of the children were ''very poor'' in a large number of cases. Failure to get proper sleep at night and day-time naps was evident among most of the children. Irregularity of meals, eating between meals, no breakfast or lunch, were all factors found in many cases which probably contributed to the poor nutritional status of the children.

The figures from even the higher-income groups showed high percentages of poor diets, physical defects, and other indications of the need of better care. ''No studies of similar size have been made on young children, but numerous smaller ones made in different localities and of various income groups bring additional evidence, as does the testimony of all workers in touch with children of these years, that the needs of the preschool years for nutritional betterment are indeed great, as judged by diets, hygiene, and physical findings.''[36]

Summaries of similar studies might be multiplied, but enough have been given to indicate the failure of parents, either because of ignorance or neglect, to provide adequate conditions for healthy physical growth and development. The figures certainly show the need for educating parents in methods of hygiene in order that children may not so early in life become handicapped because of disease.

The home, then, through the provisions it offers for sunlight, fresh air, cleanliness, food, elimination, exercise, and rest will determine in large measure the physical well-being and growth of the child during the first six years.

2. Reports from Behavior Clinics

Probably the most significant information in regard to the importance of early childhood and the failure of home and parents

[35] Roberts, Lydia A. *Nutrition Work with Children.* Chicago: University of Chicago Press, 1927. Pp. 329-330.

[36] *Ibid.*, p. 330.

to provide proper conditions for the welfare of their young children comes from the studies made of problem children in psychiatric and psychological clinics. Most of the published case studies from these clinics have had to do with children of school age. This is probably due to the fact that the misbehavior of children as they get older comes to be a nuisance and a danger to the community and society. Parents will often suffer as long as the misconduct affects no one outside of the home.

As a result of experience in the Child Guidance Clinic of New York City, Dr. Kenworthy writes: "We must always remember that the problem of the child may be due largely to the nature of his reaction to an unintelligent home situation, and that his nervous manifestations may be an attempt to adapt himself to his environment."[37] Therefore, while it is of prime importance in treating the case to help the child to better and more wholesome adaptation to the realities of life, it is only second in importance to educate the parents of the child. "They must be made to realize that in order to train the child, they must first train themselves, for, from the point of view of social psychiatry, education involves every member of the immediate household. They must be made to realize that their personal sentiments may seriously hamper the child's development, inasmuch as they are bound to fail to hold an objective, impersonal point of view in meeting the issues in the child's everyday life if they make decisions based upon their subjective feeling rather than upon objective reasoning."[38]

Although the case studies published by the Judge Baker Foundation[39] deal with adolescent and preadolescent children, they may be cited here because they show in a vivid way the influence of home and family, and particularly of parents, on the behavior of children. Delinquencies of fifteen of the nineteen cases available for consideration in this Yearbook were due in some degree to home influences.

Other causes directly related to home conditions which contributed to delinquencies in the various cases studied were lack of

[37] Kenworthy, Marion E. "Extra-medical service in the management of misconduct problems in children." *Mental Hygiene,* 5: 1921, 724-735. Reprinted by the National Committee for Mental Hygiene.

[38] *Ibid.,* pp. 9-10.

[39] *Judge Baker Foundation Case Studies.* Boston: Judge Baker Foundation. (This is a series of twenty case studies, each published in pamphlet form.)

confidences between parents and children, unattractiveness of home, lack of home-like atmosphere, inadequate family control, poor example of mother, father, brother, or sister, maladjustments in the interrelationship of members of the family.

Where children of preschool age are taken in the clinic, the reports deal much more with the work with parents than with children. It probably could be said of more than one case that the mother brought a child to the clinic when the child should have brought the mother.[40] "In the treatment of a problem child invariably the mother has to be considered as a patient, and it is frequently desirable for her to make visits to the clinic even without the patient. It has also been found that often it is not the child that has been brought to the clinic who needs treatment most, but one of the other children in the family, so that three or four members of the same family may be receiving treatment at the same time, and in every case the benefits derived by straightening out some maladjusted individual are shared by every member of the household."[41]

And again, "The home must be considered the workshop in which the personality of the child is being developed, and the personalities of the parents will make up, to a very large extent, the mental atmosphere in which the child has to live. This mental atmosphere may easily become contaminated and quite as dangerous to the mental life of the child as scarlet fever or diphtheria would be to his physical well-being. Faulty habits are invariably due to the imitation of bad examples. Yet one is quite safe in saying that the imitation of the bad example is frequently not so dangerous to the child's mental life as the way in which the indiscretion is treated by the parent."[42]

3. Studies of School Failures and Behavior Problems

A searchlight has been thrown upon the inadequacies of homes and parents by the studies which have been made of children who were failing in academic work in school. One of the earliest studies

[40] Thom, D. A. *Habit Clinics for the Child of Preschool Age.* Washington, D. C., 1924. Children's Bureau, U. S. Department of Labor, Publication No. 135. P. 16.

[41] *Ibid.*, p. 3.

[42] *Ibid.*, p. 15.

was made of sixteen children who had failed in the first grade from one to three times. These children were put in an observation class for three years in order that the causes underlying their failures might be studied. In nine of the cases the dominant cause of their difficulty was found to lie directly in home conditions. "They had been absent too much, had moved about, or had lived in home conditions so bad and so distracting that it was impossible to do normal school work."[43]

The evidence from a more recent study is even more striking.[44] Of 46 children in a public school who were reported by parents and teachers as difficult, 35 were having trouble in keeping up in one or more subjects. Mental retardation accounted for only 16; the remaining 19 were found to have certain personality difficulties such as shyness, laziness, inattention, vicious tendencies, sensitiveness to criticism, day dreaming, and fears. The other 11 who had behavior difficulties but were not failing in school were found to have such problems as temper tantrums, sullenness, crying spells, twitching, indifference, excitability, quarrelsomeness, and poor hand coördination. The author states that "in practically every case the peculiar characteristics for which the child was referred could be easily traced to their first appearance in the early years of school—kindergarten and first and second grades. In the majority of cases, also, the unhealthy habits of adaptation began in the home, and were carried into and through the school life."[45]

Two of the most interesting and perhaps the most widely known publications of case studies of failing or maladjusted school children were the outcome of the five-year program of the Joint Committee for the Prevention of Delinquency.[46]

In the first publication, *Three Problem Children,* the main difficulties of two of the three cases reported could be directly traced to home situations. Much of the remedial work consisted in chang-

[43] Woolley, H. T., and Ferris, Elizabeth. *Diagnosis and Treatment of Young School Failures.* Washington, D. C., 1923. Bureau of Education, U. S. Department of the Interior, Bulletin No. 1. P. 8.

[44] Richards, E. L. *Mental Hygiene,* 4: 1920, 331-333.

[45] Richards, E. L. "The elementary school and the individual child." *Mental Hygiene,* 5: 1921, 707-723. Reprinted by The National Committee on Mental Hygiene.

[46] Sayles, Mary B. *The Problem Child in School.* New York: The Commonwealth Fund, 1927. 288 pp. *Three Problem Children.* New York: Joint Committee on Methods of Preventing Delinquency, 1926. Pp. viii, 142.

ing home conditions through gradual education of the parents, usually the mother only.

In the second publication, *The Problem Child in School,* we have a report of twenty-six cases of failing and maladjusted school children who had come under the supervision of the visiting teacher. The cases are grouped into four groups designating the major causes of their difficulties (parental attitudes, feelings of inferiority, honesty, sex) and a fifth group of four cases representing diverse issues. It is worth noting that of the twenty-one cases not listed under parental attitudes, there were fifteen where the personal difficulties were definitely allied to home conditions and parental attitudes.

One is constantly struck by the fact that parents through selfishness as well as ignorance are handicapping their children for normal, wholesome participation in group living. Dr. Kenworthy, in analyzing the causes which underlie the development of feelings of inferiority, traces two of the four to the home: inability to rise to the level of the family's aspirations and unfavorable comparison with others in the family, especially with brothers or sisters.[47] Three of the six children described under the section devoted to feelings of inferiority were unable to come up to the standards set by their families, and in two other cases the unfavorable comparison with brothers or sisters was an important factor.

One of the cases under "diverse issues" was considered by the principal of the school to be due to neglect at home and an indifferent mother. "The Arnold family as a whole will be recognized by social workers as one of a very difficult type with which they are often called upon to deal. Such parents, neither poor enough to be dependent nor cruel and neglectful enough to be counted delinquent, but so ignorant as to bring upon their offspring most of the end-results of both dependency and delinquency, are obviously in need of the highest type of educational service that the most thoroughly equipped family or child welfare agency can offer."[48]

The author of the book brings out the fact that there was one common weakness in the families of the five children who stole. In each case the father was worthless, characterized by such traits as insanity,

[47] Kenworthy, Marion E. "The logic of delinquency," *Papers and Proceedings of the American Sociological Society,* 16. Referred to in *The Problem Child in School.*

[48] Sayles. *Op. cit.,* p. 134.

dissipation, desertion, and so forth. Whether this fact is in any way related to the misdemeanors of the children cannot be stated, of course, but it is worth consideration for those who are concerned with the influence of parents on child behavior.

In discussing the case of a girl who lied, it is stated that "imitation of a mother given to the spinning of wild yarns may well account for the first beginnings of fabricating . . . and whatever a loved mother does is in these early formative years likely to be taken as a model."[49]

The pictures of failure, unhappiness, and asocial acts which these two books flash upon the screen are undeniable evidence of the inability of parents adequately to educate children in the home. In other words, the real problem which confronts the school is that of reëducating parents and children. "Though workers in the school may do much for unadjusted children, it is only when home and school work together that the best results are to be looked for."[50]

Thus do psychologists, psychiatrists, and visiting teachers force us to see that responsibility for the behavior of school children rests largely upon parents and early home experiences.

4. Juvenile Court Data

Another source for securing data on home influences and early education is in the analysis of delinquent children who come before juvenile courts. Such juvenile courts as those in Denver, Chicago, Boston, Detroit, and Los Angeles have been attempting to study each delinquent boy or girl not only with respect to the present situation and the immediate cause of delinquency, but also with respect to more remote causes. Over and over again these case studies show that early home experiences during the preschool years of the boy or girl have had great effect.

In a group of selected cases where mental conflict was the cause of misconduct[51] the difficulty in many cases was closely tied up to the family situation. Such conditions as unknown parentage, failure to give proper education as to sex matters, lying and misrepresentation to children by older people, especially by parents, and use of profane or suggestive language in the home were often found to be either direct or contributing causes to the mental disturbance underlying delinquent behavior.

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[49] *Ibid.*, p. 169.

[50] *Ibid.*, p. 149.

[51] Healy, William. *Mental Conflicts and Misconduct.* Boston: Little, Brown, 1917. Pp. xii, 330.

But more significant than any of these, says the author, is the lack of close, sympathetic, confidential relationship between parents and child. "*Environmental circumstances* in our cases are most diverse. The histories show misdoers coming from all classes and conditions of society. There is one common feature, however, that belongs to what may be termed the psychical environment. These misdoers with mental conflicts never had anyone near to them, particularly in family life, who supplied opportunities for sympathetic confidences. Repression has gone on very largely as the result of this need."[52]

Healy also emphasizes the importance of early experience in a child's life when investigating mental conflicts. "We are bound," he says, "to contemplate the mental life of early years, not because of *a priori* considerations, but through being led back, step by step, to influences active then. We sometimes find a very direct route leading from emotion-provoking experiences and reactions of childhood to even major offenses of adult life."[53] The very early roots of sexual life in the individual may be in early childhood and carry with them important psychological as well as social implications.[54]

A similiar picture of the inadequacies of the home life of juvenile delinquents is to be seen in the publications of Dr. Miriam Van Waters, referee of the Juvenile Court in Los Angeles.[55] "In three generations of American family life the goal has changed from rearing healthy, active children to goals of modern business. Children are prematurely encased in brick and stone. Routine is dull, monotonous. Need for adventure is not met. These boys and girls become incorrigible, steal, lie, run away, throw morals overboard. The treatment is extraordinarily difficult because there is seemingly no way of changing the habits and ideas of adults who control them."[56]

The studies of juvenile delinquents made by Van Waters evidence not only the significance of present home conditions but also

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[52] *Ibid.*, p. 321.
[53] *Ibid.*, pp. 17-18.
[54] *Ibid.*, p. 30.
[55] Van Waters, Miriam. *Youth in Conflict.* New York: Republic, 1925. Pp. xix, 212. Also *Parents on Probation.* New York: Republic, 1927. Pp. xv, 333.
[56] Van Waters. *Youth in Conflict*, p. 59.

the influence which parents may have during the first years of child life. Remedial work is found to be much more effective with young children. "The fact of the matter is that as we study juvenile delinquency more, we are inclined to believe that success is in inverse ratio to age. The longer the process of conflict in the child has been going on with parents, school, and community, the deeper the hurt, the more tenacious the habits of defense. What we learn of capacity for suffering in very young children teaches us that they are injured far more than perhaps we understand in homes, schools, and neighborhoods that neglect, misuse, or fail to love or to discipline adequately."[57]

Such are the conclusions of those who have analyzed with scientific thoroughness the emotional conflicts, the anti-social behavior, the loves and hates, the futile strivings of those boys and girls who must turn to the court for guidance and help. Two hundred thousand of these youths under 18 years of age passed through the juvenile courts of the United States in 1923.[58] A vast procession of misguided, misshapen, tangled lives in need of the intelligent guidance and wise sympathy which a home should give best, but which society must give somehow.

IV. Methods of Improving Preschool Conditions

From the preceding discussion it is evident that the education and care of children before school age has not been adequate. There seem to be three different attacks by which the situation may be improved.

1. Economic-Social Conditions

The first attack is through improving economic and social conditions. There is a vast number of children who are handicapped by inadequate family income. Such social measures as mothers' pensions, legal minimum wage, and extra wages for dependents are efforts to meet this situation.[59]

The housing conditions in thickly-populated districts greatly affect the welfare of the adults but more especially of the young

[57] *Ibid.*, pp. 175-176.
[58] *Ibid.*, p. 176.
[59] Forest, Ilse. *Preschool Education.* New York: Macmillan, 1927. Pp. 242-247.

children. Space and sanitation are the *sine qua non* of modern physical and mental hygiene. The situation today in metropolitan areas demands experimentation in multiple dwellings with child needs as a basic consideration.[60]

2. Supplementary Agencies

The second attack on the present condition of childhood is the development, extension, and improvement of social and educational agencies which supplement the home. Maternity and infant-welfare centers, mental and physical hygiene clinics, child-health centers, day nurseries, nursery schools, and kindergartens are some of the agencies which are supplementing home care to-day.

3. Parental Education

The third attack, and the one fundamental to both of the other two, is the education of parents. "The community, then, examining the child at the close of his preschool years and finding him wanting, may consistently lay the responsibility for this lack at the door of the home; it may further demand that the home remedy this situation, just as the home has already been stimulated to improve its care and education of older children."[61]

"The great problem is to assist the home and the parent, not to displace them. The natural and basic agency for the educational nurture of the preschool child is in his own home, with his own father, mother, brothers, sisters, and even his own grandparents. To make that home most effective in rearing the child for which it was really created is a durable social problem."[62]

V. Need for the Education of Parents

1. Influence on Child Development

To-day there seems to be little doubt that being a parent is a job filled with grave responsibilities—responsibilities to society, to the child, and to one's own happiness. "Scientific synthesis of psychology, psychiatry, medical opinion, and social service, speak-

[60] *Ibid.*, pp. 247-248.
[61] *Ibid.*, p. 231.
[62] Gesell, Arnold. "Preschool Development and Education." *Annals of the American Academy*, 121: 1925, 148-150.

ing through court clinics and nursery school and bureaus of child guidance, now places the burden where it fundamentally belongs—upon the home, upon the parents.''[63] During the early years of child life the parents are mainly responsible for the development of the child—physically, mentally, emotionally, and socially. The foundations of growth and the beginnings of personality development are laid while the child is still under the guidance of the home.

There was a time when we might have ignored the situation by claiming that the maternal and paternal instinct would adequately provide the parents with the necessary knowledge. But modern psychology questions decidedly the existence of any such definitely-organized and specific instincts. ''We have observed the nursing, handling, bathing, etc., of the first baby of a good many mothers. Certainly there are no new ready-made activities appearing except nursing. The mother is usually as awkward about that as she can well be. The instinctive factors are practically *nil.*''[64]

But if there is a ''maternal instinct,'' Helen Thompson Woolley has rightly said, ''it is as silly to trust the maternal instinct to bring up a child as to trust the acquisitive instinct to earn a living for the family. Instinct is at the base of all we do, but does not relieve us of the necessity of training.''[65]

2. Changing Social Conditions

Even for those fortunate adults who have had a childhood in a well-balanced, intelligent home under the guidance of far-seeing parents, it is very difficult to carry over this training to their children. The rapid change in social conditions, in housing, in the mechanics of living, in customs, recreations, in social mores, which has taken place in the past twenty years makes a demand upon parents for a philosophy and methods based on *to-day*. The child of twenty years ago lived in a vastly different world, with different stimuli, different desires, and different behavior. ''The normal family is dynamic; its standards are constantly enlarging to meet requirements of the changing ethics of the world, and in process of this adjustment it carries youth along with it. New ideas of

[63] Van Waters. *Op. cit.*, p. vi.
[64] Watson, John B. *Op. cit.*, p. 278.
[65] Quoted by Cleveland, Elizabeth. *Training the Toddler.* Philadelphia: Lippincott, 1925. P. 61.

political and industrial relations, war and peace, Christian fellowship, treatment of women, crime and punishment, religious dogma, are discussed. Parents by vigor and clarity of thought furnish their children with a guiding-line.''[66]

3. Increasing Knowledge

The increasing scientific knowledge concerning child behavior and methods for guidance has also brought with it a demand for the dissemination of this knowledge to all adults who guide the lives of children. Progress in human happiness depends not only upon the accumulation of scientific facts but upon the dissemination of these facts as well.

4. Inadequacy of Schools

Finally, we cannot leave it to the schools to take entire responsibility for the education of children. In the first place, the school is greatly handicapped in time. During the five years preceding kindergarten or the six years preceding the first grade, the home is in complete control. During these five or six years, important learnings are taking place until, by the time of school entrance, the child has literally hundreds of habits well established. Even when the child is in school, he is only there three to five hours for five days a week, nine months a year, if he attends the best organized schools. During the same period, he is under the guidance of home from twenty-one to nineteen hours a day, seven days a week, twelve months a year.

The school environment must also of necessity be limited, selected, and, even in the most progressive schools, somewhat formal because of the large groups. The environment of the home, on the other hand, may be as wide as life itself, with the opportunity for flexibility and adjustment because of its informality.

Probably the most significant advantage which the home has over the school in its influence on the education of children is the continuity in leadership and guidance. In school the teacher usually remains with her class for a school year, nine months. Under the platoon systems, the children during any school year may

[66] Van Waters. *Op. cit.*, p. 75.

have from four to six or seven teachers who rotate every hour during the school day. But during all this kaleidoscopic change in teachers, the same parents continue from birth to maturity as the guides, the interpreters, the real teachers of children.

Such, then, is the basis of the movement for parental education: the realization of the influence which parents have on the development of children, the inadequacy of native endowment to guide without training, the changing social conditions, the increasing scientific knowledge about children which is available, and finally, the inadequacy of the schools to take the place which the home preëminently holds in the education of children.

V. Summary

1. The first six years of a child's life are important years from the standpoint of growth and development.

2. During this preschool period the parents and the home are the most influential factors in determining the environment for physical growth and mental development.

3. Surveys of present conditions show that parents have not been successful in meeting their responsibilities to young children.

4. The situation may be improved by changing social conditions that directly affect the home, by increasing and raising the standard of supplementary educational agencies, but most fundamentally by the education of parents.

CHAPTER IV

THE FAMILY AS AN EDUCATIONAL AGENCY

I. Introduction

a. Dearth of Studies of Home Education. The importance of the family as a social influence is generally conceded. In spite of this we find scant attention given to the study of the family as an educational institution. As a result, our knowledge, compared with what might rightly be expected, is hazy and inadequate.

The home has been so hidden by privacy, so frequently described merely by emotionlly-pleasing generalities, that less is known of the actual working of this fundamental institution than of the others like the school and the church.

In practice, in spite of eloquent eulogies of the home, the family is little recognized as a chief educational agency. This appears most impressively when one contrasts the amount and the precision of the literature relating to the teaching of the school with the poverty of the material that treats the home as an educational organization.

b. Lack of Organization of Family Instruction. The relative neglect comes not from the disposition to deny to the family its rightful prerogatives, but because the family as a teaching unit is not organized. If the family in its teaching activities had definiteness and elaborate organization, with professional officials, various classifications, and pedagogic standards, it would rival the school consciously as it now does without the recognition it deserves.

The lack of organization of family instruction, its haphazard methods and diverse standards, lead to a popular conception of education that so narrows its meaning that it is thought of as belonging almost exclusively to the schools. For example, it is commonly thought that the child starts his education when first he enters school and comes under the direction of a professional teacher. As a matter of fact, as psychological science is making increasingly clear, the child has had much of his education before he enters the conventional school—often, for his happiness and success in life, the most important part.

c. Importance of Home Education. Home instruction is not less powerful as an influence over the growing personality of the child because of a general lack of appreciation by parents of its importance. Indifference or lack of knowledge does not change the fact that what comes first to the child from the older people about him has the first opportunity to influence him and that this early influence comes to most children from their parents within the walls of the home.

So long as the home possesses the opportunity of first contacts, it maintains a teaching function at least not secondary to that exercised later by the schools.

d. Increasing Recognition of Home Education. In recent educational progress nothing is more significant or more promising than this clearer understanding of the large place the home has in the making of a child's personality. Here we find the source of the most radical and the most influential of present-day educational experiments. Attention is no longer exclusively centered upon the school and its problems, since the child who comes to it is already in large measure a product of instruction. Indeed, science in its investigation of personality has so emphasized the past failures of the home on its teaching side that there has grown up among many familiar with the situation a pessimistic attitude regarding the possibilities of parents or teachers, among others a determined effort to improve parental behavior, and even among some a belief that the teaching influence of the home for the welfare of children must be lessened.

II. Influence of the Home Among Primitive People

In attempting to trace the early development of the home as a teaching agency, we may turn to the anthropologists for information concerning the family life of savages.

1. Extent of Family Influence

a. Family Influence is Effective. Hambly and Hose[1] treat the education of primitive races from the broader viewpoint of tribal customs rather than as an activity closely related to the home. Hose tells us that "a great deal of the education of primitive youth was done by the

[1] Hambly, W. D., and Hose, Charles. *Origins of Education Among Primitive Peoples.* London: Macmillan, 1926. Pp. xx, 431.

way of parental example and the issuing of warnings." "Children imitate their elders," writes Hambly, and this brief statement reveals the effective method of family teaching.

b. Limits of Parental Influence. In many savage tribes there are definite time limits beyond which the teaching influence of the family does not extend. "The family unit is nevertheless restricted to parents and children under the age of puberty. For although the ties between parents and children last through life, after reaching puberty the children enter into new relationships, which superimpose themselves on the former ones. These new bonds result for the girl from marriage, for the boy from his entering into tribal secret society, into initiation and life in the bachelors' camp."[2]

c. Tribal Supersedes Home Teaching for Boys. The purpose of education among the primitive peoples necessarily leads to an emphasis of tribal teaching rather than that of the home. "Hence the primary object of the training is a standardizing of boys, who are expected suddenly to break away from the standards of childhood for the purpose of adopting criteria of manhood. Of these criteria obedience to tribal law is paramount; therefore special stress is placed upon the inculcation of precepts which are held to have been derived from ancestors of a remote period."[3]

d. Importance of Mothers' Instructions With Girls. The importance of mother's instruction is greater in the case of the girl than that of either father or mother in the case of the boy, but even the girl gets more of her training from imitation of the tribal life than from direct home instruction. There is a general training, chiefly informal and physical, which prepares the girl for matrimonial duties. Her general education "naturally includes some reference to agricultural and domestic duties, which in the main appear to be learned from the mother, partly by direct instruction, but to a greater extent by imitative play, during which young girls nurse babies, make string bags or pottery, use a small hoe, assist in grinding corn, carrying water, or collecting firewood."[4]

2. Meagerness of Tribal Instruction

Briffault in his detailed study of savage family-life reminds us that even tribal instruction is meager and little organized. "In most instances there is very little training in the technique of their profession in connection with the manhood ceremonies of primitive hunters and warriors; as often as not such brief and perfunctory instruction as may

[2] Quoted from Malinowski, *The Family Among the Australian Aborigines*, pp. 298-299, by Hambly, W. D., and Hose, Charles, *Op. cit.*, p. 48.

[3] Hambly, W. D., and Hose, Charles. *Op. cit.*, pp. 195-196. (Quoted by permission of the Macmillan Company, publishers).

[4] *Ibid.*, p. 285.

take place follows, instead of preceding, those tests, so that the latter cannot be regarded in the light of a pass examination connected with such training. In most cases there is no instruction at all. Organized education and training are, in all primitive societies, conspicuous by their absence. What the savage youth learns, the skill and proficiency he acquires, he picks up as best he can by imitation. Among the North American Indians who underwent such severe tests of valour, there was not anywhere any regular system of training. Encouragement, advice, rebuke, might be freely given by elder men to boys, but of any attempt at systematic professional education there cannot be said to have been a trace. The boys, says Loskiel, are 'never obliged to do anything; they loiter about, live as they please, and follow their own fancies.' Among the Indians of Guiana 'the boys run wild . . . they are left almost to themselves.' Among the tribes of South America 'parental education does not exist'; 'their children are taught nothing, are forbidden nothing.' In Africa, generally, 'children practically do as they like'; the rubric 'education' is absent from African ethnology. 'As regards education, both the word and the notion are non-existent.' In Melanesia and in New Guinea there is absolutely no sort of training. 'Children were not taught any useful habit; they grew up in utter idleness and uncared for, except they got plenty of food.' In Borneo the children 'are left to pick up by themselves whatever knowledge is necessary.' In Micronesia they 'grow up as they like.' Speaking of the Australian initiation ceremonies, Dr. Roth remarks: 'The European idea of their having a beneficially moral and educational value is erroneous.' Nothing, in fact, exceeds the indifference and carelessness of uncultured peoples as regards any systematic educational training except the enormous importance which they attach to the testing of proficiency."[5]

3. Consequences of Lack of Training

The practical consequences of this indifference based upon lack of knowledge of the needs of children come out clearly in Goodsell's summary. "It is not difficult to account for the appalling mortality-rate among savages. Ignorant as they are of the merest essentials of proper child nurture, primitive parents cheerfully violate every principle of infant hygiene. The advantages of cleanliness, fresh air, and suitable food are ignored at every turn. Yakut babies are permitted to lie in damp, unventilated rooms neglected for hours at a time; Thlinkeet infants are kept in a condition of filth which produces sores that scar their bodies for life; and Igorot children fare little better. Many tribes look askance at bathing; and the young suffer accordingly. Then, too, the food given to children is often quite beyond their powers of digestion. We are told that Bushwomen from the birth of their children 'feed them

[5] Briffault, Robert. *The Mothers.* New York: Macmillan, 1927. Vol. II, pp. 197-199. (Quoted by permission of the publishers.)

with roots and meat which they chew for them. They are taught to chew tobacco when very young, and have scarcely any human protection or attention whatever.' Unfortunately primitive peoples have little knowledge of the virtues of cow's milk as an infant diet; for even in tribes where cattle are domesticated and milk can be easily procured it is quite often not given to babies. Savage mothers, to be sure, suckle their children much longer than do mothers in civilized societies, the suckling in many instances not ceasing until the child is four years old. But this custom makes it very difficult for the child when weaned to digest the coarse food eaten by adults."[6]

4. Laxness in Early Training of Children

The same author pictures the variations and the laxness in the early training of the child. "Where a tribe has well-defined notions concerning sex relations, treatment of women, attitude toward parents, food taboos, methods of warding off evil spirits, etc., the family has the important task of starting the education of the unformed child in the group way of thinking and acting in these respects. But it must not be supposed that any conscious ethical aim is present in the minds of the parents. So far as they pay any attention to the moral education of their children, this takes the form of training them in certain habits by an appeal to unthinking imitation. Discipline in savage households is generally lenient. The child is usually neither scolded nor whipped unless the parent falls into one of those sudden fits of uncontrollable passion to which primitive peoples are subject. In such cases punishment may be swift and cruel. Among more advanced groups, as the Pueblos of North America, a high value is consciously set upon obedience of elders and observance of moral customs. This obedience, however, is not secured by corporal punishment, but by the use of weird tales told by the older men over the evening fire—tales carefully designed to arouse superstitious fear in the shuddering boys and girls.

"The part played by the mother in the moral training of her children varies with her status in the household and the group. . . . Sex antagonism and sex taboos are highly developed among some primitive peoples and have worked havoc with the mother's control of her children. Then, too, in those tribes where the sexes remain rigidly separated, little boys are taken at two or three years of age from the mother and brought up in the 'Men's House.' Such club-houses are common in the Pacific Islands and even among the Southwestern tribes of the United States. On the other hand, among the more civilized Iroquois and Wyandottes, where women were the heads of households and had no lit-

[6] Goodsell, Willystine. *A History of the Family as a Social and Educational Institution.* New York: Macmillan, 1923, pp. 41-42. (Quoted by permission of the publishers.)

tle economic and political power, the influence of the mother in shaping the character of her children must have been important and lasting."[7]

5. Experience as Education

Keller calls attention to the advantage the child has in his training from his more direct contact with nature and the concrete aims of the instruction he does receive. "Lippert remarks very justly that it is not easy to train our children because the motives of our precepts are, for the most part, beyond their perception; yet a boy will obey the lightest order of a skillful game-keeper or fisherman because he sees it justified by immediate and visible success or failure. Among the uncivilized, he finds, though children are generally treated with the greatest consideration and allowed the fullest liberty, and though the notion of authority and discipline is not yet developed, they obey willingly or, rather, follow the example of the parent, whose actions are mostly directed toward immediate and concrete ends. In a word, the requisite discipline, for people living so near to nature, is afforded by the immediate experiences of life. Where one of our boys cannot understand why he should study grammar, for example, the savage child knows by personal, immediate, and hard experience that disobedience to the suggestions of an older hunter results in loss of life or injury, or, at any rate, the escape of the game upon which he has hoped to feed. This explains the apparent paradox presented by ethnographers: that the primitive children are not disciplined much or at all by their elders and yet are generally obedient and unspoiled. It is the protection from the consequences of inexpedient conduct that ruins a child's behavior; and in primitive life such protection cannot be extended very far."[8]

III. Enlargement of the Functions and Responsibilities of the Modern Family

As we trace the evolution of the family from its simple organization among primitive peoples we find an enlargement not only of the functions of parenthood but also of the responsibility of the family as a teaching unit.

1. Adjustments of the American Family to Changing Social Conditions

The American home in all its activities, including that of teaching, has shown itself sensitive to the social conditions to which it

[7] *Ibid.*, pp. 42-43. (Quoted by permission of the Macmillan Company, publishers.)

[8] Sumner, W. G., and Keller, A. G. *The Science of Society.* New Haven: Yale University Press, 1927. Vol. III, p. 1929.

has been obliged to adjust itself. The character of instruction and the degree of responsibility that it has assumed for the teaching of the child have been a product of physical environment, including climate, occupation, and isolation, and of the social environment with its traditions and social habits. Three stages in this development appear prominent enough for classification: pioneering, rural, and urban family life. These three do not always follow a time sequence, but so far as dominant culture is concerned, they do mark three distinct periods.

a. Pioneering Conditions. Pioneering conditions determined for nearly all the people the teaching program of the family. During this time the family was an extremely effective educational agency, not only the predominating, but oftentimes the exclusive influence for the educating of the child for life.

b. Rural Conditions. Passing from the pioneering period, we find the majority of the people living under rural conditions. With the change there has come about a lessening of the obligations of the family itself, and the progressive substitution therefor of the school. The power of the family is still great, as far as influence upon the child is concerned, and has to be reckoned as a teaching agency.

c. Urban Conditions. With the advent of the city, and especially in recent years of the metropolitan district, teeming with population, and enforcing upon a multitude of people its great congestion, appears the new era which from the start has been characterized by a sharp decrease in family responsibility and an increasing disposition on the part of the parents to delegate to other institutions, either from necessity or preference, many of the obligations that had previously been assumed by the home.

At the beginning of the twentieth century all three types of family experience were being maintained, but the frontier was rapidly disappearing. Now the city is coming to have dominance not only over its own population but indirectly in considerable measure also over the village and rural family.

2. Sources of Family Control

In order to value rightly the influence of the family as an educational agency, it is necessary to recognize the source from which the family has obtained its power over the child.

a. Family Influences Begun at Birth. Since the child, as soon as he commences to develop his personality, finds himself in the midst of a definite family, with characteristic influences that begin at once to construct his character, it is obvious that in the years of early growth the child can do little else but respond to the stimuli maintained about him. These first influences are so effective that, in the opinion of some observers, much has been charged to heredity which may really have been a product of early experience.

b. Lack of Competition During Early Years. The family has powerfully molded the child, not merely because it was present at the start of his life and able to furnish him with the influences upon which he had to depend for the making of his personality, but also because being the early impressions they were simple and without rivalry since the child was so exclusively possessed by the family into which he happened to be born. Being the first impressions, simple and without competition from the outside, they were necessarily forceful, and in their effectiveness to shape the life there was nothing later except the most extraordinary events that deserved comparison with them.

3. Opportunity of the Family for Educating Children

During human history it has fallen to the family to start the processes of conditioning the growing child. Quickly there has been grafted upon the substantial impulses of the little one a characteristic form of behavior, the product of parental teaching and contact. The trend in this country has been such as more and more to limit the important instruction given by parents to their children through this early period. Now, although the family has lost so much in the proportion of its teaching function that it is seldom thought of as an educational agency by the unreflecting person, it still maintains a dominant rôle in the making of personality because of its unrivalled opportunity during the first years to give shape to the growing personality. Legitimate criticism of family functioning is based upon this power which the family will possess just so long as it has the child within its intimacy during his first and most impressionable years. The prevailing criticism of the family's use of this opportunity expresses itself in a program of reform, either

by eliminating mueh of the family's opportunity to mould the ehild or by demanding that the family be made more efficient by bringing its methods into harmony with scientifie principles.

IV. Instruction Given by the Present-Day Family

The eontent of the instruetion of the present-day family ean be easily elassified under the four terms—physieal, voeational, psychological, and soeial (including the moral).

1. Physieal Education and Health

a. Habit Formation in Early Years. At the beginning of the life of the ehild, when the family power is greatest, the physical interest predominates, and it is here that we see to a larger extent than in the others the importanee of a good teehnique on the part of the family. The home cannot escape dealing with the physical needs of the ehild, for to negleet him along this line is nearly the same thing as to will his death. Nor is it possible for the family to carry on practices that influence the physieal development of the child without at the same time giving him instruction. The simplest thing that the parent does brings about habit-formation in the ehild. The ehild does not merely receive shelter, food, and eomfort from the parent, but as he takes what the parent gives him, he establishes behavior habits and, later, standards which, within the physical realm, eonstitute his basic preparation for living.

b. Effect of Early Régime Upon Physical Constitution. The events of this period do not, of course, merely establish ways of living physically that are likely to be maintained in later years; the régime produees more or less permanent effeets upon the physical eonstitution. Medieal seienee, by reeognizing this faet and attempting seriously to enlist the sympathy of mothers and to train them in the physical eare of infants, has demonstrated, by lowering the death rate, how mueh the mothers can do to help or hinder the developing organism to maintain its vitality, to eonquer its enemies of infeetion, and to establish a body that can stand the wear and tear of later life.

c. Importance of Health Practices in Early Life. The seriousness of the family influence hinges largely on the fact that the

practices established in health routine, which are followed as a matter of course by the child, give him the advantages or the penalties of wise or unwise habits. Bad habits are easy to start and hard to break. Good habits are easy to construct and just as persistent. Most unfortunately the parent who permits the bad habit to become firmly incorporated in the growing child's life is not likely to appreciate his mistakes, so that the family ordinarily is not equal to the finding or correcting of its own blunders. Evidence is plentiful that the problem of good hygiene for children in the family is found among all social classes. The badly nourished child is found among the wealthy, and the child of good physique and wholesome habits appears among the poor, at least unless the poverty is so excessive that it denies the growing body the necessary conditions of normal growth. Nevertheless, there is statistical evidence that low income is not only associated with a high death rate but frequently also with bad hygienic practices and attitudes. Without question, underneath the low income and unwise practices is lack of capacity or faulty training which perhaps deserves to be considered the root of the trouble, rather than the low wage or the unhealthful habits.

d. Methods of Teaching. As we come in closer contact with child problems, it grows increasingly clear that children are taught by their parents largely through example rather than by verbal instruction. This is shown in the reactions of the child to food, and there is a mass of evidence that discloses that behind the fussy child there is an undisciplined adult who voices his food peculiarities in such a fashion as to impress strongly the developing child, who soon has well-established likes and dislikes. Although it is with reference to food that we find the most spectacular illustration of parental example, it is by no means true that it is here only that children imitate their parents in practices that are contrary to health. Less attention has been given to the results of parental example upon the sleeping habit; here as in the case of food we have conditioning influences that unquestionably last throughout life and normally hamper the efficiency of the individual. Although much less spectacular, the influence of the parent upon the child with reference to posture is certainly considerable, not merely because of direct imitation but also as a consequence of the family-

patterns that have grown up around the posture habits of the parents. Parents who use their bodies little and surround themselves with furniture that caters to their habits of slumping, instead of sitting, have prepared for their children an environment that bends them to its cramping lines as they loll in cushioned seats and rest on overstuffed pillows.

2. Vocational Training

A second sort of instruction given by the family to the child can be broadly described as vocational training. With respect to this sort of teaching we detect a great loss as we pass from the pioneering and rural family to the urban. In the city the opportunity for instruction along the lines of vocational training is exceedingly limited. As a consequence, the family has to surrender in great measure what was once one of its largest functions and depend almost exclusively upon the school. In both the pioneering and rural families, on the other hand, not only was there an opportunity for the working of the child in useful toil, an experience of great value in the construction of his character, but this also usually gave the parent and child, through their association, a common ground of understanding and sympathy. The destitution of the city family in ways by which the child and parent can work together represents one of its greatest losses, for which at the present we have discovered no satisfactory substitute. In so far as education effectively offers any training along the lines of pre-vocational preparation, it tends to be specialized and suggest the factory and the laboratory more than it does family labor. Even in domestic science it is only by strenuous and continuous endeavor that the instruction is kept practical and well-adapted to the average experience of the woman in the home. The surrender on the part of the average modern family to the narrower and less adaptable training possible in the city has led, most important of all, to the giving up of an experience which made parent and child enter together into the brotherhood of toil. Socially this change is of the greatest importance, easily making it possible for parents to covet riches, recognize class distinctions, and lose respect for productive labor. Already there are evidences of the passing of one of our great social values, early experiences in toil without regard to class—owing, of course not entirely, to the inability of the

family to provide the chores and household responsibility which used to help so much in the training for later life.

3. Psychological Development and Personality

If the modern trend is for family life to reduce its training in vocational directions, its tendency with respect to the psychological responsibilities of the home is the exact opposite. Recently the family has gained considerably in an understanding of its dangers and opportunities as it guides the child in his psychic development. The largest contribution of modern science in respect to the child has been the interpretation of early childish experiences that underlie personality. Here the great emphasis has been placed upon the emotional growth of the child. It has been demonstrated by experiment and investigation that not only are the emotional disturbances of the child responsible for much of his maladjustment, but that the home itself has led the child into difficulty by bad management, faulty example, and lack of understanding. The problems are chiefly those of fear, inferiority feeling, and the building up by the child of a program which will permit him to escape the realities of life. With reference to these three emotional difficulties which easily turn the child from normal development, many investigators are convinced that the power of the parent is great, that the family can as easily build up right attitudes as bad. In other words, the child is not faulty from birth, nor does the parent need to root hereditary menaces out of his nature, but rather a sound program calls for cultivation of the child's resources in order that his emotional life may be mature and equal to the testing of the everyday grind of the adult period.

4. Social-Moral Education

In social and moral fields the family still maintains great influence over the growing child, and, whether it will it or not, becomes a teaching agency. It has come to be recognized that one of the great dangers of family experience comes from a temptation, shared by the parent and the child, to build up great protection in the growing life, and, by the encouragement of the impulse to continue dependent, to create a 'parent fixation' from which the child with great difficulty later struggles to escape. Although there has been a decrease in the consciousness with which the family influences

the religious and moral growth of the child, the home still has much to do with shaping the personality in its relation to morals and religion. There appears recently to be a slight disposition on the part of the church to stress the family's part in religious education rather than to be content with its own efforts to help the child.

5. Adaptation of Instruction to the Development of the Child

As we watch the family in operation as a teaching agency, we find it undertaking a change with the development of the child. By meeting the needs of the child as they develop, it is enabled to exercise indirect influence upon the unfolding individual. As we find the child at birth he is exceedingly limited in his resources, but he at once begins the gradual growth of increasing power. Starting with his eye and hand coördination, the enrichment of his experience goes forward with increasing rapidity. Walking and talking represent events of greatest importance and bring him into a different relationship with his parents. By the power of locomotion the child increases his freedom and captures the attention of the parent, who is forced to give heed to the child's behavior. The child's ability to walk about when he still has little knowledge of how to protect himself from dangers is at present, on account of the automobile, a source of even greater anxiety than formerly to many families. The establishment of the more elaborate contact of child and parent through the speaking of the child and the rapid accumulation on his part of a vocabulary also requires of the parent a new type of instruction. The family influence upon speech is so great that perhaps the child never entirely frees himself from the characteristics of his early family association. As soon as the child begins to ask questions, he taxes the patience and the knowledge of the parent. Here, again, there is evidence that the early impressions given by the family in normal life have much to do with establishing personality traits in children that last all through life.

V. Inherent Dangers of Family Education

So much is made of the risk of family education that its dangers deserve analysis.

a. Intimacy and Privacy of the Home. The first peculiarity that reveals the significance of the family is its intimacy. It is

within the family circle that the child gets his first impressions and his chief habit-sets. Personality throws away the coercion of public standards within the privacy of the home and in consequence the child is forced to meet in the home the ordeal of intimate and familiar contact.

b. Difficulty of Establishing Standards. Another risk that belongs to the family comes from the fact that there is great difficulty in establishing for the home functional standards. As a rule the family's idea of what it needs to accomplish for the child runs easily toward some definite, but static, attainment. Effort is made to teach the child to accomplish some concrete task, with little regard to the meaning of this for the child or for his personal growth. The fallacy of assuming that the adult value carries meaning to the child is one common to all education, but parents are less likely to guard themselves against this than are well-trained teachers.

c. Lack of Objective Supervision. This second difficulty is more significant than it otherwise would be because we have no way by which we can supervise family life. It does not have the advantage of the schools that comes from an outsider's inspection, and the faults that so easily develop in the parent's management are rarely corrected by the parent's realization of his mistakes. If the child is helped, it usually must be by outside influences that recognize the failure of the family and attempt consciously to reconstruct the child's growth. Unfortunately the indifferent parent is tempted in his effort to control his child's behavior either to favor conduct that is most convenient for himself or to demand a mere conforming to the conventions of the group. In other words, the parent is likely to have his attention upon himself or upon outside approval rather than upon the needs of the child. If faulty development because of the family were confined within the home, its importance would be greatly lessened, but whatever happens to the child in his relationship with his parents, brothers, and sisters has a result that becomes a part of his personality, and is carried into the outside experiences, usually throughout life.

VI. Needed Changes for the Improvement of Family Education

From a social point of view a wise policy with reference to the home as a teaching agency should, to meet the demands of those interested in children, comprise certain definite principles which may be briefly set forth here.

1. Non-Isolation Policy

The home cannot afford to be isolated or independent. It cannot hope to function well unless it enters into closer relationship with the other institutions which help make the child and also uncover the mistakes of parents in his earlier preparation. The effective way to reform the family is not found in a direct attack upon its faults but in a relationship between it and other social institutions which will automatically reveal to the family its faulty practices.

2. Education for Parenthood

a. Preparental. If the family is still to maintain to any degree its present functions as a teaching agency, there is need of preparing those who enter upon marriage and family life to meet wisely their responsibilities.

b. Parental. The demand made by parents for specific counsel when they come face to face with concrete difficulties is one factor in the instituting of the various experiments that are now developing in the effort to meet this need. Some more enlightened parents have even gone so far as to see the wisdom of asking experienced persons to pass judgment upon the family setting, not because conduct difficulties have arisen but because the parent naturally fears his own bias and subjective standards and desires assistance in correcting his possible mistakes. Parental sensitiveness, which for so long has made it hard to help the family, has in recent years remarkably decreased. This is an advantage, for it removes the basis of former skepticism regarding the value of instruction for parents. It gives encouragement to those who believe that fathers and mothers can be helped to use wisely the opportunity provided in the early years of the child to give him a good start in life.

CHAPTER V[1]

DAY NURSERIES

I. Definition

The term *day nursery* as used in this country stands for an institution having one primary purpose—namely, the day care of children who remain part of the family unit but who for social or economic reasons cannot receive ordinary parental care.

Where regulation by municipal or state ordinance exists, the legal definition may be somewhat as follows: "Any institution or place in which three or more children, not of common parentage, are received for temporary guardianship and nursery care, apart from their parents, whether for compensation, reward or otherwise, during part or all of the daylight hours, shall be deemed a day nursery."[2]

II. Types of Support

Supporting this type of service are the following agencies:

1. Private individuals for gain (tenement-house nurseries; nurseries for children of business and professional women)
2. Private individuals organized as a body, incorporated or unincorporated, to establish a day nursery as a charity
3. Churches and religious organizations
4. Welfare associations
5. Social settlements, as a part of their community work
6. Industries, as a means of securing and holding women workers
7. A public school system

In this list are four main groups deserving consideration. Numbers 2, 3, 4, and 5 may be considered as one group, since the object of each is charitable relief. The four groups then are: (1) the commercial nursery, (2) the philanthropic nursery, (3) the industrial nursery, and (4) the nursery under the control of a public school system.

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[1] The Committee gratefully acknowledges the assistance of Mrs. Barbara Bartlett, Graduate School, Yale University, in the preparation of this chapter.

[2] New York City Ordinance, 1928.

1. The Independent Commercial Nursery

The first group, the independent commercial day nursery, includes the nursery in what is probably its earliest form. This was the neighborly care for a small fee by one friendly mother for the children of others who must work outside the home, thus eking out two inadequate incomes.

This type under industrial conditions has developed the day nursery in its lowest and least desirable form, *e.g.*, the tenement-house nursery where infants and toddlers are found crowded in unventilated family rooms, in hazardous and dirty surroundings, with exposed milk, improper food, and no place to rest but the floor or the family bed.

These nurseries are used by mothers in localities where organized nursery service is inadequate or does not exist. They are also used by mothers who chafe at necessary nursery restrictions, by those too ignorant or indifferent to appreciate the skilled care given in the better nurseries.

Nurseries of this type are probably much more numerous in crowded foreign sections than the public realizes. They are difficult to regulate, for they spring up overnight and operate for months without coming to the attention of the proper authorities. They contribute nothing to childhood but extra dangers.

The newer type of commercial nurseries is on an entirely different plane. The secretary of the National Federation of Day Nurseries reports that its office has numerous requests for nursery care for the children of business and professional women who are able and willing to pay the full cost for such service. Whether this will result in the establishment of this new type as a permanent factor or whether the nursery school and the progressive private school will take its place is a matter which comparative convenience and expense will probably determine.

2. The Philanthropic Nursery

The second group, the privately supported philanthropic nursery, is the type most commonly known to the public and in which the greatest number of children is received. This type will be described more fully later.

3. The Nursery Organized by Industry

The third group, the industrial, is self-explanatory. It comprises day nurseries organized and supported by individual industries in order to attract and hold women workers by offering freedom from worry over the danger of illness or accident to unguarded children. During the war there was a threatening increase of this type. Industry used the nursery as a means for tempting women into factories, even offering women with nursing babies time to leave their work for the purpose of feeding them. In most cases the care offered was very inadequate. It was in charge of untrained women. As the nursery plant was usually a part of a factory building, it offered no care for children of school age, who are certainly as much in need of supervision as the infants and preschool children for which provisions had been made. Happily, even under these conditions, the nursery proved so expensive to the manufacturers that most of them were abandoned when war conditions ended.

Whether this increase is only temporarily halted is still a question. All reports show a great increase in the number of married women entering industry and only a small proportion of these are using existing nurseries. A study[3] of industrial mothers made in Philadelphia in 1919 showed that of 558 working mothers with little children, only 51 used the nurseries, although they lived in sections where the nurseries were long established.

On the other hand, in 1926 the following statements were made as to New York state conditions: "The whole trend is toward the employment of women in larger and larger numbers. They like to feel—the industrial woman as well as the professional—a certain kind of economic independence. . . . Another large factory, in one of our Central New York industrial towns, where the number of married women employed in the factory is just increasing in leaps and bounds because their city is developing so industrially, finds they have got to seek means of securing women's labor in order to meet the needs of production. The employer frankly told me not more than two weeks ago, 'I am going to open a nursery in connection with my factory, because I can't get married women to work for me and I need them.'"[4]

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[3] Hughes, Gwendolyn. *Mothers in Industry.* Unpublished thesis, 1919, Bryn Mawr College, quoted by Tyson, H. C., *Day Nurseries in Pennsylvania,* p. 12.

[4] Address by Nelle Swartz. "The trend of women's employment." Association of Day Nurseries of New York City, Annual Report, 1926, pp. 8-15.

In another case a manufacturer definitely modified his industrial policy to meet the needs of his married women employees and found it necessary to delay the beginning of his week until Monday noon as his workers refused to come in until the week's washing was on the line.

Such conditions will not be found in crowded city sections where there is a surplus of labor or where adolescent workers tread on the heels of older people. This new increase in employment of married women will probably be confined to given cities where the labor supply is not otherwise adjusted to new industrial demands.

4. Day Nurseries in a Public School System

The fourth group is limited to one city, Los Angeles, California. Following the enforcement of the compulsory school law in 1910, the public schools found themselves faced with the problem of tiny brothers and sisters left unprotected when older children in the foreign sections were compelled to attend school. The Board of Education furnished the room, and the parent-teacher association undertook the supervision of the first babies who had been left about in school corridors and offices. The problem proved to be of such importance and so closely allied to school conditions that in 1917 the Board of Education undertook the support and supervision of all needed nurseries. It now operates 20 with a monthly enrollment of over 1,400 children.

In a recent letter the Assistant Superintendent in charge of this work lists the following reasons for operating the nurseries: They offer the first step in the Americanization of foreign children and their mothers; they afford proper education for the small child, in courtesy, table manners, patriotism, etc.; they prevent absence of larger children from school. If no nurseries existed, many children would be deprived of regular attendance at school by being required to remain at home to care for the little ones.

Funds from two sources are nearly sufficient to cover the entire cost of these nurseries: the parent pays a fee of ten cents a day per child; and the state makes, to each school district, a grant based on the number of children attending daily.

It is evident that the real objective in the establishment of these nurseries was the good of the older children and only indirectly that of the little ones. Unless the object of such service by a board of education is chiefly scientific preschool education and the education of parents in better standards of child care, it can hardly be

justified. Such a department would seem to be a dangerous substitute for more thorough forms of relief in cases of poverty and neglect. Certainly, it belongs more properly under private auspices or a board of public welfare. So far, no other city has undertaken this service as a part of its school work.

III. History

There are approximately 600 regularly-organized day nurseries in the United States. Even the government census of 1923 failed to list the innumerable commercial nurseries. It is probably true, however, that the majority of children receiving day-nursery care are in these 600 nurseries. A study of their history and standards will be typical of the service given.

1. Begun as a War Measure

Organized day nurseries have existed in the United States for 65 years. It is significant that they were at first, like so many other forms of child welfare, a by-product of war. It was in Philadelphia in 1863 that the first permanent day nursery was established to care for the children of women needed to manufacture soldiers' clothing and to clean in hospitals. Men were at war; industries needed workers; women were urged or forced to become breadwinners; children were neglected. The last two factors have continued to be the important elements in all-day nursery expansion.

2. The Period from 1880 to 1900

Those established were modeled on the French crèche. Until 1880 the number increased slowly. From 1880 on, their history can be roughly divided into two periods, the first from 1880 to 1900, the second from 1900 to the present year.

a. Economic Necessity. In each period certain factors influenced and moulded day-nursery procedure, but one outstanding cause lay behind all growth—namely, economic necessity. During the first period private philanthropy met the needs of women forced to support their children because of widowhood, desertion, or illness. The pioneer women whose vision and devotion made possible this extension of friendly help to less fortunate sisters have hardly

received the credit which their service deserves. If in later years there could have developed a clearer vision, on the part of the boards, of the possibilities of the day nursery in organized social service, a better understanding of the complicated problems it faced, more sympathetic and understanding criticism by other welfare agencies, it might now be doing a larger piece of work with adequate financial support.

b. Surrendering of Children to Institutional Care. While industrial necessity and economic need are the essential factors in considering day-nursery growth, certain other factors influenced its development. Until 1900 few cities had any form of outdoor relief for poverty or unemployment. Consequently, the number of children surrendered by their parents to institutional care became alarming. In a report of 1899 for New York City alone 15,000 children were thus cared for at an expense to the public of over a million and a half dollars. Apprehensive over the dangers of lessened parental responsibility, over the unnecessary hardships endured by mothers and children thus separated, and over the great financial burden placed on the tax payer, relief agencies urged the increase of day nurseries as a more humane and less costly method of mitigating these evils.

c. Formation of Day-Nursery Associations. In 1892 ninety regularly-organized day nurseries were listed; by 1897 they had increased to one hundred and seventy-five. Standards were so diverse and the need of a better understanding of functions and problems so evident that nurseries began to combine in local city or district associations. In 1898 these united in a National Federation of Day Nurseries, which now has an office at 105 East 22nd Street, New York City. It acts as a clearing house for day-nursery information.

3. The Period from 1900 to 1928

From the beginning of the second period, in 1900, many factors complicated day-nursery development.

a. Influence of Immigration. Immigration flooded the country with an overplus of low-paid labor. Great industrial expansion was possible, because this surplus labor was willing to work for so little. Bad living conditions and economic pressure drove women

to add their bit to the family income. The women's invasion of industry began with industry making a direct bid for even lower-paid women workers. The resulting neglect of childhood was serious. Whole sections of foreign-born had nothing in their past experience to guide them in meeting this unknown world of congestion. The health hazards and the danger to family life made a stirring appeal to philanthropists and again they urged an increase in day nurseries. Even as late as 1926 one city shows that one third of all admissions to its 20-odd nurseries were from families with both parents working. Industry became interested on its own account. It seemed more profitable to have a woman employee's mind at ease about her children than to have her work interrupted by worry. As a result of these two conditions, two kinds of nurseries appeared, namely, those organized and supported by philanthropy, taking care of the problems created by industry, and those organized and supported by the industries themselves.

b. Criticism of Health Standards. Other factors influenced social work at this time and affected day nurseries. Day nurseries under pressure exerted by various relief agencies gave service to ever-increasing numbers. During this period of expansion health standards became so low that severe criticism was forthcoming from physicians and other health agencies. Under pressure to meet the needs of increased numbers without adequate financial support, day nurseries had not kept pace with advanced medical or social knowledge. Very justly, the medical men criticised the admission of infants and emphasized the importance of keeping mothers with nursing babies out of industry. They also criticized the lack of needed inspection for disease and needed health supervision.

c. Criticism of the Effect of Day Nurseries upon the Home. The danger of lessened parental responsibility was emphasized by social welfare workers in nurseries which admitted without adequate family case work large numbers of children whose parents both worked. It was generally assumed that the establishment of the day nursery now freed the woman from home responsibilities and encouraged her to enter industry. Other forms of relief were put forward as more adequate and better safeguarded. The establishment of mothers' pension funds was urged as a better means of assisting a worthy mother than day-nursery help, with its serious

limitations. The extension of the probation system was recommended in order to keep delinquent husbands at productive labor instead of in prison. The National Council of Social Workers has objected to the establishment of day nurseries because of these (supposed) facts. There is conclusive evidence that these criticisms are not valid when applied to the inherent nature of the day nursery, but only valid when applied to the quality of its service.

As a matter of fact, the day nursery was a result, not a cause, of woman's entering industry. The laws relating to desertion by husbands were inadequate, and mothers with small children were enticed into industry. To meet the needs of women who were forced or tempted into the factory, day nurseries were established. The fact that only a small proportion of married women in industry use the nursery even when available is another answer to this criticism. Mothers' pensions are too low in most states for adequate support; they are not granted in cases of desertion, unemployment, or non-support unless of long standing. Emergency cases of illness, death of mother, disabling of father, make nearby neighborly care of the children a boon.

It is possible to restrict day-nursery privileges to families with whom constructive family case work can be done. In this way the care of the child in the nursery becomes an interlocking factor in a larger plan of family welfare, calling for coöperative work with all types of social organizations.

In 1919, the National Council of Social Workers gave the day nurseries a place on the program of their annual meeting. This may be an indication of the appreciation of the need of this type of social service.

IV. The Situation To-day

1. Types of Families Using the Day Nursery

The families using the day nurseries are drawn from homes which fail to function normally—in other words, from 'broken homes.' The following analysis of reasons, for nursery care in Pennsylvania is typical of other industrial cities or states:[5]

[5] Tyson, Helen Glenn. *Day Nurseries in Pennsylvania.* A study made for the Bureau of Children, Department of Welfare, Reprint Bulletin 17, p. 12.

Father dead	287	Father insane	15
Father deserted	158	Father in jail	6
Low wage of father	101	Mother unmarried	28
Parents separated	72	Mother dead	35
Father disabled	38	Mother sick	23
Father sick	58	Mother deserted	11
Father out of work	25	Family in debt	7
Non-support	31	Miscellaneous reasons	23
Parents divorced	13		

The children of mothers who must assume the double rôle of homekeeper and bread-winner, without relatives or friends to help share their burden, make up the bulk of day-nursery admissions. These mothers are largely of foreign parentage, from congested districts where health and family standards are low. This places on the day nursery a double burden: the scientific care and education of the children after admission is granted, and the education of the parents in applying these better standards in the home.

2. The Care of Infants

a. Age-Range of Children. The day nursery itself is a large family. Its members range in age from infants under a year old to children of school age. The bulk of admissions ranges probably between the ages of one and six years. The pressure from physicians to keep nursing mothers at home has tended to decrease the number of infants in the nurseries where better provision to meet family needs can be provided by other relief measures.

b. Twenty-Four-Hour Service. However, there is still need for infant care and often for twenty-four-hour service. There is a tendency to concentrate this needed service in large cities into *shelters* where babies of mothers receiving hospital or convalescent care may have both day and night supervision. New York City has six such shelters, some accepting older children. New Jersey has several good ones, and there is one at Worcester, Massachusetts. Other nurseries take on this service in emergencies like sudden illness in the home or the necessary absence of the mother.

c. Extent. The secretary of the New York Association of Day Nurseries reports that 33 of the 49 day nurseries in the association admit infants under nine months. It is probable that this implies a daily unit of five or six babies in the nurseries which make this a

special part of their service. In these cases the babies are usually in charge of a trained baby nurse under the supervision of the superintendent, who is usually a registered nurse. This does not hold true in the smaller nurseries or in those of smaller cities or towns.

d. The Problem. The problem of giving adequate care to infants in connection with the care of older children is a costly and difficult one. Wherever possible, arrangements should be made to keep the mother at home with the child until it is a year old. This will be increasingly feasible as the coöperation of other local welfare agencies is sought.

V. Standards

1. Early Lack of Supervision

Like most social agencies, day nurseries were established and extended through the first decade without supervision or responsibility to any regulating agency. The increase was sporadic and irregular. Those commanding adequate funds and having a clear-visioned, intelligent board of managers gave care which kept pace with advancing knowledge of social and child welfare. But some with intelligent boards lacked funds and some with ample funds lacked efficient boards; and so, unregulated and unsupervised, the greater number gave well-intentioned but inadequate physical and educational care to their children.

2. Typical Example of Low Standards

The following situation is only too typical of a day nursery run by those who lacked both vision and funds.

A day nursery was supported by a church known over a large section for its humanitarian and social welfare work. It was housed in the church basement where no sunlight ever came, with no furniture but church settees, chairs, and tables. The children were in charge of an ignorant woman who was given the position as an act of charity and against whom charges of cruelty to the children were preferred. There was no medical supervision, no provision for cleanliness or rest, no opportunity for outdoor play or fresh air, no playthings but a broken, torn assortment of second-hand toys. And yet all efforts to have these conditions corrected met with this response from the church supervisor: "We cannot afford to do more and what would these working mothers do without us? They are grateful for this."

3. Cost of Adequate Service in Day Nurseries

The question of adequate support has always been a handicap to effective day-nursery work. The necessary housing and equipment, the skilled care by trained workers, medical inspection and supervision, proper food, provision for cleanliness, and protection in illness make a high per capita cost. This has been an important factor in keeping standards low. The following quotation[6] illustrates the necessity for making sure that sufficient funds are in sight before a nursery is started:

"In general it may be stated that good day-nursery care in a nursery accommodating from 35 to 40 children a day and not overweighted with the more expensive care of babies costs on an average about $10,000 a year. . . . Roughly the division of the budget is about as follows:

Salaries	30-40 percent,	or $3,000-$4,000
Food	20-30 percent,	or $2,000-$3,000
General Maintenance	50-30 percent,	or $5,000-$3,000"

In places such as Cleveland, Ohio, and Springfield, Massachusetts, where Community Chests finance the city's charitable and relief work, the day nursery is considered a worthy part of such service and entitled to adequate support.

4. Development of Health Standards

a. The Need for Health Provisions. Wherever groups of children are housed for hours together, extra health hazards are created unless the situation is most carefully guarded. This places health standards as the first concern of a nursery board. The ever-present danger of the spread of infections and contagions, the compelling evidence of undernourishment and poor mouth hygiene, all centered the first efforts at standardization upon proper medical inspection and supervision, diet, safe housing, facilities for isolation, cleanliness, fresh air, and sunhine.

b. Early Improvements. Progress along these lines came where progressive boards of managers voluntarily brought these essential conditions about in their own nurseries. In other cases pressure

[6] *Ibid.*, p. 26.

from interested medical men and local boards of health forced better conditions.

c. State and Municipal Ordinances. This movement resulted in the whole-hearted backing of the best nursery leaders to establish state and municipal ordinances in different sections of the country. California and Ohio each have such a state law. Massachusetts has one placing the enforcement in the hands of the local city boards of health. Cities such as New York, Philadelphia, Cleveland, Boston, and Chicago have carefully phrased ordinances establishing a minimum of safeguards. Where these are intelligently and conscientiously enforced, conditions are greatly improved.

d. Future Progress. But it is only fair to state that the better nurseries voluntarily live up to the requirements, while the poorer ones escape being closed through the mistaken kindness of the authorities. Real progress must come through the intelligent direction and combined effort of the medical men, clear-visioned managers, trained staffs, and social workers.

5. Need for Educational Standards

a. Educational Regulations. On the educational side such statutes recognize the need of a staff trained in the physical care and mental health of children and the limitation of the number of children to a worker. This is done in order that the child may not become institutionalized but may develop an individuality. These regulations also require that suitable recreation be provided.

b. Early Appreciation of Educational Function. It is interesting that the day nursery almost from the beginning recognized its possibilities as an educational factor in child welfare. Many papers in the earliest Federation reports stress the importance of this side of the work and foreshadow in thought and ideals many of the fundamental ideas underlying the present nursery school. They had not at hand, however, the scientific facts which the newer workers enjoy.

c. Education of Preschool Children. For a long time the children from infancy to school age were given practically no education in the day nursery except that which may have come indirectly from a régime based on health standards. The children were given little training in specific habit-formation. There was practically no

effort to provide experiences which would be educative and enriching. The play materials were meager and ill-suited to constructive child activity. This was due in large measure to the lack of vision for the educational possibilities of the preschool years, to the fact that the personnel in the day nurseries have had little or no training in the mental or physical care of children, and to the lack of sufficient funds to secure personnel who were thus trained.

The first attempt to provide better educational opportunity for preschool children was in providing kindergartens or Montessori schools for the four- and five-year-old children in the nursery. This was sometimes done through coöperation with other welfare organizations. More recently there has been a movement among the more progressive day nurseries to open a nursery school[7] within the day nursery for the two- and three-year-old children. The development of such educational service is expensive, but it is absolutely essential if the day nursery is to meet the real needs of young children.

d. Education of Parents. The day nursery also recognized in its early days the importance of educational work with its families. Mothers' meetings where instruction was given in child care were regularly held and classes in sewing and cooking were a recognized part of their service. Efforts were made to supervise home conditions as to diet and health. This work was carried on under the most discouraging conditions, for the difficulties of giving instruction to women tired from a day's factory work, with home duties in the remaining hours, were almost insurmountable. Under pressure of actual nursery care this part of the work was often lost, or indifferently done.

Now every progressive nursery recognizes the fact that, unless efforts are made to keep home conditions near the level of nursery practice and to help develop a more intelligent parenthood, most of what is accomplished in the nursery is lost. Without such a program the work does not justify the money given to support the institution.

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[7] For detailed descriptions of nursery schools organized within day nurseries see "The Mary Crane Nursery School," and the nursery schools of the "Cleveland Day Nursery and Free Kindergarten Association," in Chapter VIII. A description of a Montessori nursery school organized in a day nursery is given in "The Bowling Green Nursery School," in the same chapter.

6. Conference on Welfare Standards

Following the war (1919) the Children's Bureau sponsored the Washington and Regional Conferences on Child Welfare Standards. A discussion of the day nursery as a factor in the scientific care and education of the preschool child brought out the great divergence of views concerning the status of the day nursery as a social institution. Dr. Gesell's statement is the clearest summing up of the results of the discussion. "There is as yet in America no solid body of opinion regarding the functions and the future of the day nursery. Social workers, parents, educators, and physicians have numerous and divergent views on the subject; standards are very uneven in different communities and often in the same community, and too often standards do not appear to exist at all. The nursery never comes under educational supervision, and only sometimes under compulsory medical supervision. Only in a few states are nurseries controlled through licenses and inspection. In short, the day nursery is far from being a commonly accepted official agency of child hygiene in this country."[8]

7. Improvement in Standards

Since Gesell's statement was written, in 1923, there is some evidence that the day nurseries themselves realize that standards must be raised if the public is to be asked to support their work. Better-trained workers are being employed and social case workers, psychologists, and psychiatrists are asked to contribute their knowledge in order to round out the effective service given the nursery families. Better medical and dental care is being given in most nurseries. Local city associations have formulated standards—notably, New York, Philadelphia, and Chicago.[9]

The essential standards as formulated by the National Federation of Day Nurseries are listed here as typical of general requirements. They are followed by a list of suggestions which it is hoped the nurseries will adopt as fast as possible.

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[8] Gesell, Arnold. *The Preschool Child from the Standpoint of Public Hygiene and Education.* Boston: Houghton Mifflin, 1923. Pp. 41-42.

[9] Mrs. Tyson's report, referred to previously, contains a splendid list of standards based on the laws and ordinances of various states and cities, the minimum standards of the National Federation of Day Nurseries, the Philadelphia Association of Day Nurseries, and the Study of Day Nurseries of Philadelphia made in 1916.

Essential Standards of a Day Nursery

1. Hygienic plumbing.
2. Walls and floors must be finished so as to be washable, and each nursery should have an isolation room for emergency cases.
3. Before admittance each case must be investigated by a qualified worker who should continue regular supervision of the cases.
4. Children must be examined by a physician before entrance.
5. Children should be examined by a physician once a month, stripped if possible.
6. Daily examination of each child by superintendent or competent member of the staff before admission to the nursery.
7. All children should be given at least two meals a day.
8. Dietary recommended by Federation should be used.
9. Separate dishes, drinking cups, towels, wash-cloths, combs, toothbrushes, and aprons must be provided for each child and so tagged that there will be a complete outfit for the use of each individual child.
10. All children of kindergarten age should brush their teeth daily in the nursery. Examination and treatment by a dentist if possible (Dental Clinics).
11. All children should wear nursery aprons—not a uniform—and infants be dressed in nursery clothes where possible.
12. The clothing of each child should be hung in a well-ventilated closet far enough apart to avoid contact. (Mesh bags are recommended).
13. Persons in charge of a nursery should have understanding of emotional and behavior problems of children and, in meeting their serious problems, have the coöperation of a mental hygiene clinic or a psychiatric worker connected with the nursery.
14. There must be a rest period for all children, on cots or beds. No child should be allowed to rest on the floor or with head on table.
15. The nursery should give some form of education to children from three to six years of age.
16. Not more than eight infants or fifteen runabouts should be under the care of one attendant. A teacher should have an assistant for more than twenty-five pupils.
17. Simple records of each child must be kept. An annual report should be presented, following the suggestions of the Federation.

Recommendations

1. The survey of health and nutrition and its appended dietary, which is on file in the office of the Federation, is recommended to the nurseries.

2. Each child should have at least two or three hours a day in the open air or in a room with windows open and outdoor clothing on.
3. The superintendent of the nursery should be a competent woman with an intelligent understanding of the physical and mental health of the children. The staff should be adequate and composed of women who are capable of coöperating in a competent way with the nursery schedule.
4. If, after morning inspection, signs of a contagious disease are noted, the child must be placed in the isolation room and kept entirely apart from the other children and the Department of Health notified at once.
5. It is recommended that cod-liver oil, one teaspoon daily from November 1st to April 1st, be given the children, if sanctioned by the nursery physician.
6. As much instruction as possible in the care and understanding of their children should be given the mothers either through the mothers' clubs or through home visiting by a *trained* worker.
7. There should be on file in the office of the nursery a record that each child regularly attending has been examined by the nursery physician at least twice a month, the said examinations to be not less than two weeks apart. There should also be a record of the weight of each child.
8. All persons employed in the care of children in the day nursery shall present a health card from the Department of Health or some regular physician, showing their freedom from communicable disease, before they shall be engaged by the day nursery.

VI. A Day's Activities in a Day Nursery

A typical day in a nursery may illustrate the problems and diversities of nursery work.

The nursery must be equipped to meet varied needs, for with its large family it must provide for the health, growth, feeding, rest, and recreation of many ages—from an infant to a school boy of twelve.

1. Arrival at the Nursery

The nursery opens at 7 or 7:30. The nurse or superintendent is on hand to meet the incoming family. The mother is already weary with the early awakening to get the children clean, dressed, fed, and into the nursery in time to get to her shop or factory. Throats, noses, eyes, and skin are examined as the mother waits. When the children are accepted, she goes to her work secure in the knowledge that the children are safe and happy until her return. She may have left three children: a baby, a toddler, and a school boy.

2. The Care of Infants

The baby is carried up to the baby nursery. Home clothing is changed for nursery garments, and milk feedings are prepared according to his special formula. He rests in his own crib, so arranged that the utmost cleanliness is possible, and his day of carefully-divided periods begins: feedings; rest; perhaps a sunbath; play with toys in his crib, or chair if he is old enough.

3. The Program for Preschool Children

Then there is little sister of three. If the day nursery is in a large city and under the guidance of a progressive board, she will probably have the advantage of attending a nursery school. In such case her program will be similar to that of the Gowan Nursery School described in Chapter VIII. Or, there may be a Montessori school with a program like that of Bowling Green Nursery. If, however, there are no such provisions, her day and that of the other toddlers will be something like this: Play until 9:15; wash face and hands; drink milk; play until 11:00; thorough washup for dinner; dinner; nap from 12:30 to 2:30; dressing; play until 4:00; wash face and hands; supper between 4:30 and 5:00; play from then on until mother comes from work at 5:30.

4. The Program for School Children

Her brother of seven years is examined with the others and sent to play until time for public school. Then with other school children of his group he is taken to his school building by a nursery worker. At 12 he is back in the nursery. He scrubs up with his individual face cloth and towel. The dinner which is served is arranged, as are all the other meals, to give just the right number of calories, the right vitamines, and body builders for his special age. He goes back to school in the afternoon and returns to the nursery at 4:00 o'clock for a lunch of crackers and milk. He plays outdoors if possible; if not, there are indoor games, music, building, or constructive work fitted to his age and needs until the arrival of his mother at 5:30.

5. Consultation with Parents

While the mother is waiting for them to be dressed, she has a quiet talk with the superintendent or her assistant, stating her difficulties and getting needed advice and help. Perhaps the superintendent visits her in the evening after the children are in bed for further confidences. Sometimes she comes to get permission for the administering of toxin-anti-toxin, something which will insure a nursery year free from diphtheria if all mothers are equally coöperative.

6. Responsibilities of the Staff

It has been a full day for all concerned. The nursery superintendent and her helpers have had to look after the running of the institution,

to write records, to consult the doctor on needed corrective work, to consult the nurse on the results of certain food formulas for the new baby. Often there is a hurried visit to find out why Frances is not in the nursery. The work of a day nursery multiplies all the duties of a busy mother by forty, with the added precautions necessary because of numbers.

VII. Day Nurseries and Nursery Schools

1. Relief Function of Day Nurseries

There is often confusion in the public mind over the terms *day nursery* and *nursery school.* Although they have much in common, their ultimate goals differ. The day nursery is primarily a relief institution. Except in cases of illness the economic status of the family is the most important factor in deciding whether to grant or withhold aid. This aid is given with the aim of helping the family to become financially or socially independent. This emphasis on relief gives social service a more important part in a complete day-nursery program than is necessary in that of a nursery school.

The age limits in the day nursery are greater than in the nursery school, for good day-nursery service must provide for infants, preschool, kindergarten, and school children, each group equally important in the day-nursery program.

2. Educational Function of Nursery Schools

A nursery school[10] has a definite educational goal limited to the needs of the preschool child and emphasizing the education of his parents in intelligent child guidance. Any child in the community whose parents wish their child to have this expert training may be admitted to a nursery school.

A day nursery cannot be a true nursery school, but the day nursery needs to incorporate the educational service of the nursery school.

VIII. Present-Day Possibilities

There is evidence that the directors of day-nursery work are seeking help on their special type of social service from every available source. There are several outstanding needs to be met.

[10] For a full discussion of nursery schools, see Chapter VIII.

1. Consideration of All Aspects of Child Development

There is need for more widespread understanding among day-nursery executives of the importance of all aspects of child life. There has been a great growth in raising health standards during the past two decades. But physical health cannot be attacked without due consideration of other aspects of child development. The child is an integrated being, and right social adjustments can only be attained in an environment which is planned for mental and emotional well-being as well as physical health. It is necessary to make provision for varied, enriching experiences, and self-initiated and self-directed constructive activities. The principles of mental hygiene must be understood and become a part of all procedures in the nursery, and expert guidance must be offered through behavior clinics to families with unusual problems of emotional maladjustment.

2. Scientific Care of Infants

The nursery is now giving more adequate and intelligent care to the needs of its preschool, kindergarten, and school group. The group which entirely lacks skilled care is the infant group. It is a question whether, in order to allow a mother to enter industry, infants should ever be admitted under the age of twelve months. But if such admissions are found necessary because of the lack of other resources, the most expert service in care, feeding, and housing should be provided. With the knowledge we now have as to the important effects that physical and emotional surroundings have on this age and the influence which personalities with whom infants come in contact have upon them, no work is justified which does not surround them with proper safeguards.

3. Parental Education

In spite of its difficulties some form of parental education must go hand in hand with the expert care given the child in the nursery. The day nursery as well as the nursery school may make intelligent parenthood its goal by employing the régime and methods of child care and training as a point of departure to educate parents and modify home conditions.

4. Need for Vision

As long ago as 1906, Mrs. Anna Garlin Spenser in a paper read at a Federation meeting said, "I believe the evolution of the day nursery will be on the educational side." This seems like a prophecy. The extension of this aspect of its work by the day nursery will be limited only by the vision of its directors and their ability to interpret their vision to the public in such a way as to win understanding support.

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CHAPTER VI

PRESCHOOL AND PARENTAL EDUCATION PROMOTED BY MATERNITY AND INFANT WELFARE CENTERS

Maternity and infant welfare centers are now a conspicuous feature in the educational program of mothers and of preschool children. The program of these centers as we know them to-day, including prenatal, infant, and preschool hygiene, has developed from the earlier work confined to infants and directed toward the lowering of infant mortality.

I. Historical Sketch

Infant welfare work had its origin in France, where, in 1844, centers called créches, which provided shelter and a degree of physical care for the young children of working parents, came into existence. Later, other organizations were formed; notably, in 1865, the Société Protectrice de l'Enfance, which had as its object "to encourage maternal nursing, watch over infants sent out to be wet-nursed, and *to instruct mothers* in all classes of society in the care of their children." In 1876 the French Society for Nursing Mothers approached the problem of infant mortality by caring for the mother as well as the baby. Consultations for Nurslings were established in Paris in 1892, and milk depots in 1894 provided free service which later merged in a program of regular supervision of infants for two years, instruction of mothers in infant hygiene and feeding, promotion of breast feeding, and the distribution of clean milk.

The earliest record of this type of work in the United States is the establishment in 1889 of a milk dispensary for infants in New York. The movement developed rapidly from a remedial to a preventive program, passing through the stage of the cure of infants suffering from summer diarrhea and other intestinal disturbances during the hot summer months to an all-year program of the supervision of the well baby.

It was early evident that, in order to deal adequately with the problem of infant mortality, the hygiene of the expectant mother must receive attention; so, as a natural growth, prenatal super-

vision was added in many of the centers. Still later, the work was extended beyond the two years of infancy to include the physical hygiene of the preschool child, based upon the realization of the importance of this period for health protection and good development. This enlarged program is found in an increasing number of centers. Thus, to-day, the maternity and infant welfare center is an institution for the promotion of maternal, infant, and child health through medical supervision and education.

II. Work of a Typical Center

1. Staff

In any typical maternity and infant center we find the physician, the nurse, usually a dietitian, and very often a social worker. Recently a psychiatric social worker and a dental hygienist or dentist have been added to the staff at certain centers.

2. Prenatal Service

a. Examinations. In the service devoted to prenatal work, a social history is taken, and expectant mothers are given a thorough medical examination, including necessary measurements and laboratory tests.

b. Instruction in Hygiene. A vital part of the work of the prenatal service is the instruction given to the mother regarding personal and home hygiene during the period of pregnancy and the preparation for delivery and care of the newborn infant. This instruction is carried on through individual conferences and group meetings, and is made to apply to the actual conditions under which the woman lives as disclosed by the home visits of nurse and social worker. The methods employed include lectures, demonstrations, mimeographed and printed literature, and exhibits. Through all the education, emphasis is placed upon the necessity for early and continuous medical supervision during pregnancy.

3. Infant Conference

a. Examinations and Consultations. At a typical infant conference, the social history is taken for newly enrolled cases. The nurse then weighs and measures the baby without clothing, after

which the doctor makes a thorough examination and advises the mother concerning the progress of the baby. A careful record of all findings is made by the physician, including the record of growth.

A most important factor in the education of parents in infant stations is the medical examination and the conference with the doctor concerning it. The physician who takes advantage of the opportunity which this affords wields a great influence in the practices of the mother. In the early days of the work in Paris, Dr. Budin said of the consultation that it was "worth just as much as the physician who conducted it, but no more." This is as true to-day as it was in 1892.

The mother is expected to report regularly at the center, at which time the physician checks on the progress of the child and advises with her concerning her program. This provides continuous medical supervision and education, and, because it emphasizes healthy development measured against accepted standards rather than the cure of disease, brings to the mother a realization that the home program is the most important factor in the health and growth of her baby.

b. Home Visits and Instruction by the Nurse. The education of the mother begun at the station is continued in the home by the nurse. She instructs the mother and demonstrates matters of home hygiene as well as the care of the baby, adapting her teaching to the limitations of the home.

c. Group Meetings. Further education of mothers as a part of the program of an infant welfare center is carried on through group meetings. Certain information necessary to all mothers lends itself to group presentation, in which demonstration plays a large part. Lessons thus taught are further emphasized through individual instruction and demonstration in the home.

4. Preschool Conference

a. Initial Examinations and Consultations. The routine procedure of recording social history, weighing and measuring, and thorough medical examination is conducted in the preschool con-

ference in a manner similar to that in the infant welfare conference. In addition, dental clinics are a part of the center's work in an increasing number of places. In the physical examination of the preschool child, the physician notes as of great importance the health and food habits and the child's reactions to food and to other items in his daily program. The physical examination forms used in many of the preschool centers indicate what an important part the record of these habits plays.

b. Immunization to Disease. It is also during this period that a careful check is made by the physician as to whether the child has been protected against disease through immunization, and in case he has not, emphasis is placed upon the necessity of this before entrance into school. Some centers administer the immunization to preschool children.

The physician's opportunity to explain the scientific basis for immunization and its importance to the child's health may lead to the building up of an intelligent attitude in the community toward preventive medicine and public health measures.

c. Appeal to Child. The opportunities for education in the preschool center are significant, for here an appeal may be made not only to the mother but to the child as well. In this education the physician again plays an important rôle. His regular inspection of the child focuses the attention of the mother on healthy development, which is dependent upon the home program.

The medical examination is an important factor in the education of the child as well as of the parent. His coöperation may be secured by the physician who sees its value in stimulating health habits. Moreover, the child who has become accustomed to the periodic examination gains a confidence and freedom from fear in his contact with the physician which helps to build in him a wholesome attitude toward medical supervision in later life.

Certain phases of the physical examination furnish not only information concerning the child's condition, but a medium for the education of the child as well. Among these are the examination by the dental hygienist or dentist, and the hearing and vision tests which are conducted as games in some centers and arouse great interest among the children.

d. Measurements at Regular Intervals. The weighing and measuring at regular intervals is another important feature in the center's educational program. This both furnishes an index to the child's health and serves as a device for interesting both parent and child. It emphasizes for the mother the necessity for noting growth beyond the period of infancy and serves as a rough measuring stick for her to determine whether the program for which she is responsible in the home is producing results. For the child the regular weighing and measuring is a most appealing device—even a very young child soon becomes interested in growing big. The dietitian and nurse build upon this interest in stimulating health habits through subsequent teaching.

e. Behavior Difficulties. Such conferences between physician and mother frequently bring to light bad adjustment between mother and child and lack of understanding by the mother of how to cope with certain habits or attitudes. While extreme cases may become problems for the habit clinic, the pediatrician following the physical development of the supposedly normal child must advise the mother concerning the handling of the child with the finicky appetite or concerning similar problems relating directly to physical health. In certain centers the importance of child training in an infant and preschool hygiene program has been recognized by the addition of a psychiatric social worker to the staff of the center and making available psychiatric clinic service for special cases.

An appeal may be made to the older children of the preschool group by a variety of devices, and the centers have developed material and methods for direct health teaching among this group for use at conferences and in the home.

III. Agencies at Work

Since the work of maternity and infant welfare centers has been directed toward the reduction of infant mortality, the results can be partially measured in terms of mortality rates. In the areas served by these centers a study has always showed a noticeably lower infant death rate than that of the community as a whole. It was natural, therefore, for an increasing number of districts to establish centers in an attempt to bring down their rates.

1. Private Agencies

The early efforts were largely promoted and supported by private agencies. Quite early, special organizations were formed, usually known as infant welfare societies or by some similar name. The work of these earlier societies was concentrated on the problem of infant mortality in the more congested areas of our large cities. More recently, smaller cities have also developed centers. In some places, especially in large cities, the economic status of a family determines its eligibility for attendance at a center.

The work of the Maternity Center Association in New York City is an outstanding example of scientific service and education in a maternal and infant welfare program. Between the years 1918-21 it conducted centers in different districts in the city, from which a nursing service was extended for the education of mothers on physical care during pregnancy and in some cases for nursing service during confinement. The program also included at the centers classes for mothers on the hygiene of pregnancy. Teaching exhibits were developed for use in this connection. In 1922 the Association concentrated its efforts on the development of a complete maternity service in one district. Group instruction for the education of mothers on the hygiene of pregnancy was made an outstanding feature of this program. The teaching exhibits used earlier were further developed to include graphic material on the development of the baby, food, nursing equipment, and infants' and mothers' wardrobes.

Ambulatory clinics were established to provide medical supervision for expectant mothers who were receiving nursing care from other organizations, but who would not otherwise have medical supervision. This organization also has conducted for the last two years private or appointment classes as a service for mothers in the professional and salaried groups.

2. City Health Departments

The results obtained by these societies demonstrated the value of medical supervision of the young child and particularly of parental education in child care, so that gradually a public opinion was built up in favor of the extension, as a public function, of such a service to larger numbers. In many cities maternity and infant centers are now maintained by the health department, supported by public taxation. New York City led in this trend toward the establishment of centers under public auspices when the city health department established a Bureau of Child Hygiene in 1908.

3. State and Federal Agencies

The first extension of the activities of infant centers into rural districts became possible when a few states formed bureaus of child hygiene about 1913 to 1917. The conferences conducted under such state auspices were largely ambulatory, although in most instances communities were urged to maintain permanent centers if possible. From 1918 to 1922, bureaus were created in many additional states.

a. Federal Aid. In the meantime the United States Children's Bureau had been created by Act of Congress in 1912. Its studies of infant mortality in typical American communities were a great stimulus to the work against maternal and infant mortality in both rural and urban areas. The Children's Bureau outfitted and sent into rural districts a "Child Welfare Special"—a motor truck equipped as a clinic. This truck created great interest for miles about whenever it drove into a school yard or a courthouse yard. Mothers brought their babies and preschool children, eager for the examinations and advice from the physicians and nurses.

In 1921 Congress passed what is known as the Sheppard-Towner Bill, "An Act for the promotion of the welfare and hygiene of maternity and infancy and for other purposes." This Act provided slightly over a million dollars per annum as federal aid to those states which matched the government appropriation. The administration of this Act was made the responsibility of the Children's Bureau.

b. Conferences. The provisions of the Act have been accepted by all but three of the states, and by Hawaii. The work carried on has been aimed at the need of the rural areas, and its major objective has been education of parents. A regular schedule of health conferences has been carried out in many of the states. The procedure in these conferences is similar to what has already been outlined for a typical center. As in all welfare centers, the primary object is education of parents, and the results secured are in direct proportion to the skill of physicians, nurses, and other workers in developing a technique for this.

c. Demonstrations. An interesting development of maternity and infant welfare center work is the launching of a number of county-wide demonstrations with county nurses for follow-up.

Practically every county which has a full-time health unit features maternity and infancy definitely in its public health program.

The health demonstrations conducted under the auspices of certain foundations are including, as a vital part of a coördinated public health program, prenatal, infant, and preschool health work in which parental education plays the major part. Among these may be cited the demonstrations under the Commonwealth Fund (including Fargo, North Dakota; Rutherford County, Tennessee; Clark County, Georgia; and Marion County, Oregon); health demonstrations conducted by the Milbank Memorial Fund in Cattaraugus County, New York, and Syracuse, N. Y.; and the metropolitan demonstration coördinating the health activities in the Bellevue-Yorkville District of New York City.

In 1925 a Maternity Nursing Service was established in Tioga County, New York, under the joint direction of the New York State Department of Health and the Maternity Center Association. It is an example of the extension of work into the rural communities made possible by the Sheppard-Towner appropriations. Four centers were established, and the type of service developed by the Maternity Center Association in New York, including group instruction of mothers, was carried over with some modifications into the rural district.

The nursing demonstration in prenatal care conducted in Richland County, Ohio, during a three-year period, 1924 to 1926, is another example of the use of Sheppard-Towner funds for intensive work in a rural community. The emphasis was upon prenatal instruction, and the results in lowered maternal and infant mortality point to the enormous value of the program.

IV. Possibilities and Limitations

Maternity and infant welfare centers offer great possibilities for the education of parents. Starting with their main objective—the saving of infant lives—they have progressed to a stage where they are directing their efforts toward the best possible development of the young child. Such education is wielding an influence among an increasing number of parents in the large cities and in the rural areas through county-wide and state-wide activities.

The tendency in this country, however, is away from the policy of including all classes of society in the education promoted by

maternity and infant centers followed in some countries. The use of economic status as a basis for eligibility for service limits the influence of this educational program to the poor in many of our centers. In the work carried on by state departments, however, this line has not been drawn, though emphasis has been placed on reference of mothers to private physicians for supervision and corrective work.

There is a difference of opinion concerning the advisability of such limitation. Some hold that the instruction in the hygiene of pregnancy and child care received at the centers should be made available to all women without regard to their social or economic status, especially since the programs of our educational systems have not included instruction of this sort until very recently and even now in relatively few places. These advocates of the extension of the influence of these centers to all groups point to the record made by New Zealand in the lowering of its maternal and infant death rate where the education in maternal and child hygiene conducted at centers and through visits of nurses in the home has been promoted through all classes of society. On the other hand, there are those in this country who see in this policy a tendency towards state medicine which they fear will interfere with the progress of medical science.

The maternity and infant hygiene program of the center may become the first level in the physical hygiene program of the community which is later carried on by the public school. The demonstrations already referred to serve as examples of a coördinated community health program. The record of physical status, of diseases, immunization, corrections, and of growth and health habits that results from the continuous supervision maintained by the center furnishes a wealth of information which should be made available to the school as the child enters the kindergarten or first grade. There is little question that the knowledge obtained at a well-conducted center concerning the physical, social, and mental habits of the child and his family, if drawn upon by the school, would throw light on many a problem of physical inadequacy or social or mental maladjustment within the school.

The home which has been under the guidance of a center usually develops an intelligent attitude toward medical supervision which may be of value to the school in its program of physical care and

health education, and the school's contact with the home and its program of parental education may be aided greatly by contacts already made by the center and the information there assembled.

Coördinating the work of maternity and infant centers with social and educational programs within the community promises many desirable results. The service in physical care and education in physical hygiene which such centers are equipped to render may be drawn upon by day nurseries, nursery schools, and children's institutions, thus avoiding a duplication of service or a lack of an adequate program of physical care on the part of such institutions. The day nursery, the nursery school, or the children's institution may in turn become a laboratory in which the children may be observed and studied and the recommendations made at the child health center carried out.

The activities of certain centers have been expanded to promote education in child care and training in vocational schools and colleges; special groups of teachers, nurses, and physicians also receive instruction so that they in turn may lead parent groups. These centers offer special opportunities as teaching centers for the training of nursery-school and kindergarten teachers. Such an extension of the work of the center widens the influence of its program and bridges the gap between its specialized service and the community.

The centers are developing as training places in preventive medicine in some sections, and the plan commends itself as an important type of coördination of their service with educational programs. For example, at the University of Louisville, Kentucky, a prenatal center is developed to train undergraduate medical students in prenatal care. A physician from the University Medical School conducts the clinical work and the State Health Department has detailed a maternity and infancy nurse to the center.

The same type of center is conducted in Portland, Oregon, by Oregon University, where nursing service is supplied by the State Department of Health. A charge of $5 to $15 is made if a patient can pay. The service serves the dual purpose of teaching prenatal care to the undergraduate students in the obstetrical course and giving prenatal care and education to the expectant mother. It is interesting to note that Oregon's maternal mortality rate was 74 per 10,000 live births in 1921 and had declined to 59 in 1926.

There is an opportunity in the program of the maternity and infant center for a more comprehensive course of instruction than is now commonly found. Budgeting, home management, cooking, standards of adult as well as child health, sanitation, and home hygiene, and the fundamentals of public health protection might be added to the course of instruction in certain of the centers at least. The contact made so naturally through the mother's interest in the physical progress of her child can be used as a means of promoting individual and group instruction on these subjects indirectly connected with the individual child's needs and of very great importance to the health of the family. Child training, practical instruction on home play, and recreation are also features for consideration in such a course.

There is a trend toward including in the work of the maternity and infant centers a mental health, as well as a physical health, program with the emphasis in education on child training as well as child care. The possibilities in such a coördinated program are very great, indeed. Observations on the child's reaction to food, his play activities, habits of rest, his natural posture, his adjustment to other children, have been carried out in some child conferences, either by special provision by the center itself of space properly equipped or through coöperation with a nursery school. This enlarged program, either under the auspices of the maternal and infant centers or through coöperative arrangements with agencies equipped to render psychiatric and educational service, offers a rich opportunity for education of the preschool child and his parents.

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CHAPTER VII

THE CLINIC AS AN AGENCY FOR THE EDUCATION OF PARENTS AND CHILDREN

I. Introduction

In order to understand the behavior of children, either in the nursery, home, school, or elsewhere, we must interpret their behavior in terms of past experiences as well as in terms of present physical, intellectual, and emotional life. It is necessary to keep in mind how closely related and dependent upon each other are the child's mental and the child's physical life. Serious and irreparable errors may ensue if there is lacking a most careful and painstaking clinical examination, as well as the necessary laboratory tests essential to revealing those physical conditions which are often at the basis of conduct disorders.

Therefore, a clinic which is concerned with child guidance and parental education demands the highest type of medical, psychological, and social personnel. Here one has to make a diagnosis and prescribe treatment on the basis of data that are often acquired hurriedly and under conditions less favorable than prevail when the patient is in a hospital. Furthermore, to the clinic come those cases whose problems are frequently less well-defined because of their incipient stage, yet more responsive to wise management for the same reason.

There are different types of clinics operated throughout the country dealing with various aspects of the child's life. Most of them are primarily concerned with the physical life of the child and ignore entirely other aspects. In more recent years, clinics which deal almost exclusively with problems of learning and education have been organized as part of the school system. A third type of clinic, and one that promises to pave the way for a better understanding of the child, is the so-called "child guidance clinic," which aims to study the child as a living organism trying to adjust itself to its environment and its manifold problems. It is from this last group that we may expect to gain a better understanding of the child as a whole and to comprehend more clearly the inter-

play that exists between the physical, the intellectual, and the emotional aspects of the child's life.

Any approach to behavior problems of childhood which features intellectual equipments or inferiority complexes or adenoids and tonsils or any single factor to the exclusion of other important factors is not only doomed to failure as an institution for child welfare, but is also certain to do much damage to the individual child.

II. Health Clinics for the Preschool Child

1. Importance of Preschool Hygiene

With all the interest in the child which has developed during this century and the latter part of the last, the period of life from two to five years of age had, until recently, been neglected. The awakening of popular interest in this important period has given impetus to a vast educational problem.

During the preschool period physical and mental casualties often occur which handicap the individual throughout his life. This is a most important period for the development of a sound body and wholesome physical and mental habits. Hygiene of the preschool years is of threefold nature—nutritional, physical, and mental. The three must be coördinated to develop the child as a whole.

The hygiene of the early years requires coöperation with the parent, the church, the school, the community, the health department, and welfare organizations. All of this is of an educational nature—largely education of the parents in the needs of the growing child, since it is the task of the parents to guide the toddler in its first grasp of the problems of life.

2. Present Activities

a. General Statement. Included among the varied agencies devoted to this program are health clinics. The health clinic was primarily established for prenatal and infant care. The expectant mother with other children found it difficult to visit the clinic unless she took the toddler with her. Gradually, it became apparent that this furnished an opportunity to include the preschool child in its program.

However, it must be said that the program for preschool child hygiene has not yet developed into any definite form. At present the work consists mainly of the physical examination of the child and of the giving of advice as to the correction of physical and nutritional defects.

b. Extent of Health Clinics. In the course of the survey, by the American Child Health Association, of 86 cities whose populations ranged from 40,000 to 70,000, scattered over 31 states, some interesting facts were brought out.

Seventy of these cities had clinics devoted to maternal and infant hygiene. Fifty-two included the preschool child in the program of the work of these clinics. One-half of the clinics were managed by private organizations, and only 17 by the official health agency.

In 1923 the United States Public Health Service surveyed the health department practice of 100 large cities of the United States, each city having over 70,000 population. Definite signs of progress were noted since the 1920 survey. Seventy-two of these cities had provisions for clinical study of the preschool child under official health agencies. Voluntary agencies provided means in the other 28 cities.

c. Broadening the Program. Several cities—for instance, Boston, Grand Rapids, Chicago, Minneapolis, San Diego, and New York —have shown a real progressive spirit. Special training in child behavior problems is one of the requirements of the supervisor. This shows the trend of the preschool program—not only to teach the mother the physical needs, but also to aid her in her difficulties with the behavior of the child. This awakening of popular interest in the whole problem of the child seems to be the most important development of the program. A child guidance clinic is used for the special behavior problems.

d. An Outstanding Center. A clinic, or center, which has done very constructive work during the last year is the East Harlem Nursing and Health Demonstration. It has had under its care a population of approximately 6,000 children from one to five years of age. It started in 1923 with an organized preschool service. The one principle subscribed to was that education of the mother in the home should be the starting point of the health work of preschool

children. They give the name of "clinic" to a medical conference; it does not seem reasonable to limit the meaning of the word "clinic" to a building permanently devoted to clinical work. Medical findings at the conference or clinic open the way to the nurse for home work with the mother and child. Interest of the mother in the welfare of the preschool child depends on the character of this home visiting. The entire facilities of the clinic for nutritional, physical, and mental hygiene are used to this end.

In addition, group instruction is given to mothers on the general problem of child welfare. Apparently, only the more intelligent mothers develop sufficient interest in child care to continue this class study. But by this means more enlightened mothers are scattered throughout the community. This method of reaching the mothers and children has also been adopted by the bureaus of child hygiene of many of the state departments of health.

e. Conferences. The annual report of the Children's Bureau for 1927 shows that there were 2,686 conferences held in 19 different states. These itinerant conferences were of educational value, as they attracted the interest of mothers to the needs of the runabout child. The conferences have led to the development of more permanent centers, and the word "clinic" can be appropriately applied to this type of conference. During the year 1927, 283 new health centers were established in 43 states. Of these centers, 135 were combined with prenatal and child health centers, 140 were child health centers, and 8 were prenatal centers. The center which considers the child problem from conception to school age would seem to be the preferable one. Many of these permanent centers have been taken over by the community, independent of state aid except for advisory visits and contributions of literature and records.

3. Rural Developments

In the development of health in rural areas the county health unit plays a very important part. There are now about 337 full-time county health units in the United States. This development has been fostered by the United States Public Health Service. It is now generally agreed that permanent public health work in a community, especially in the rural sections, can best be carried on by the county health unit, with the aid of advice and literature

from the state and federal governments. The trained county health officer and nurses offer a stable organization for rural child welfare work. The securing of community financial support of an organized county health unit is an educational problem of some moment. The United States Children's Bureau has offered an outline for group study of child welfare which should be of material aid in developing this important field.

The mobile clinic for the preschool child has been used in several states under the direction of the state health department with federal financial aid. This is an educational experiment to arouse the interest of parents in isolated communities which may be reached in no other way. The mobile clinic carries a physician and nurse and is equipped with a room for physical examination. Motion pictures, slides, exhibits, and literature are used as educational aids.

III. The Mental Hygiene Clinic

A mental hygiene clinic is an agency organized for the study and treatment of behavior problems. In its preventive work it is particularly interested in children. The physician, often assisted by the psychologist and the social worker, endeavors to help the child to attain a healthy mental development or to guard against the more serious problems of human behavior, such as mental disorder and delinquency, by dealing with the beginnings of unhealthy behavior. These beginnings are shown chiefly by failure of the child to get along with others, with his parents (tantrums, running away, faulty habits), his teachers (failure, truancy), and his companions (sensitiveness, seclusiveness, stealing, cruelty).

1. Growth of the Clinic Approach to Education

The evolution and national spread of mental hygiene clinics for children has been an interesting process. In 1909, when Healy began the Juvenile Psychopathic Institute in Chicago, his was the only organization of its type. The social and psychiatric background for the work existed, but this plan of organization was a decided step forward. The influence of this newly discovered field for science and technical skill spread slowly at first, so that by 1915 the total work of this sort barely doubled the work done in

1910 by Healy alone. But by 1920 it had increased fivefold, and by 1925, with the added impetus given it by the Judge Baker Foundation and the Commonwealth Fund program for the prevention of delinquency, the work had reached an extent twenty times that carried on by Healy in the beginning.

Meanwhile, within the clinic, a process of stabilization was occurring. The different staff members were finding how they could make their greatest contribution and were learning to coördinate their efforts. The aims of these clinics went through a series of changes. They demonstrated first the justification of their work as a means of understanding and treating disorders of human behavior. The treatment of behavior problems was considerably hampered until they came to see themselves not doing the job alone, but doing it through the community and requiring good community facilities to help the clinics' endeavors. As in all other problems of human distress, here also the start was made with the grosser problems, but it became increasingly evident that prevention requires recognition of early stages or prodromal danger signals. Danger signals are always so many more than the casualties that to make them an object of attack increased the work many fold.

2. Approaches to the Education of Parents

This concept of dealing with beginnings increased the problem of maintaining mental health far beyond the capacity of any clinic, and, reversing the previous situation, made of the clinic an agency to help the community do its job rather than an agency to be helped by the community to handle a few children. The clinic, through its function of community education and organization, had to gird the community just as our other public health endeavors have done.

Obviously, to be preventive, the educational work must eventually reach parents. How to reach parents most effectively, however, has been less obvious. They could be approached either directly by the clinic or on the other hand indirectly by reaching those who have a close relationship with parents, *i.e.*, schools, social agencies, medical profession, and clergy.

Just as dealing with every danger signal was beyond the capacity of any clinic, so the direct approach to teaching all parents or even those parents in need of help was an impossibility for the clinic alone. It came to be appreciated that the indirect approaches

reaching persons of higher average training and intelligence and with a professional interest, were the most efficient paths toward the educational goal of the clinic. Given a clinic having connections with an enlightened school system, social-work system (including courts), and medical profession, the parents would be subjected to a far greater and more continuous influence than any clinic could exert directly upon parents. At the same time, the direct contact with parents by the clinic was not necessarily eliminated. Direct parental education was just reduced to a position of secondary importance in the planning of those clinics which were in a position to carry out the indirect education. With other clinics the parent and child continued to be the immediate interest.

Some clinics are in a much more strategic position for community education than are others, and the educational program has to be fitted to the plan of organization and closest community contacts of the clinic. A clinic organized as a part of a public-school system can approach parents indirectly through the teacher better than it could as a part of a city hospital.

Clinics are organized differently because cities differ both in their degree of social development and in the place of birth of interest in a clinic. In one place there will be a well-developed school system with little else in the community to sponsor the mental health of children; in another the social agencies or hospitals have made relatively more progress. Elsewhere, both may be well-developed, but the initiative for a mental hygiene clinic has arisen in some quarter that gives it entirely different color than if it had developed elsewhere.

3. Varieties in Clinic Organization

a. From the Standpoint of Supervision. Clinics consequently vary from city to city, so that any estimate of their work and any plan for their operation must be made in the light of the whole situation locally, rather than according to what some competing city has planned or is doing. A short review of the variety of clinics will emphasize the point that many different community influences produce many different clinics.

Most clinics are medically directed. Others are under the direction of psychologists. Some of these have nevertheless medical

consultation. Of those under medical supervision, the greater number are conducted by psychiatrists. A few have been developed by pediatricians. They correspond in nature to the habit clinics (as those conducted in Minneapolis), dealing largely with very young children, or to the child guidance clinic, as the Mt. Sinai Children's Health Class.

b. From the Standpoint of Affiliations. Some of the mental hygiene clinics have found it advantageous to associate themselves with existing agencies, such as schools, courts, social agencies, psychiatric hospitals, general hospitals or dispensaries, or with institutions of one sort or another. Their internal organization and aims may correspond to any one of the different types of community clinics detailed below, but their connection definitely colors their program. Some of the state hospitals have organized the mental hygiene work of their district through an extra-mural program including clinics.

Other clinics have been organized as independent units. A few with a less intensive local program, a greater national influence, and a greater interest in professional teaching and research than in parent education partake more of the nature of institutes. The Institute for Juvenile Research in Chicago, the Judge Baker Foundation in Boston, and the Institute for Child Guidance in New York City are of this type. Of course, on their cases they inevitably do carry through a certain amount of direct parental and child education and through their contacts do a great deal for the children of the whole community in an indirect way.

The Institute of Juvenile Research in Chicago conducts a preschool branch as its contribution to a coöperative health center plan. Several agencies interested in child welfare unite with Hull House in working out this scheme. The objectives of this preschool branch are essentially those of a child guidance clinic, emphasizing particularly community education. The clinic holds sessions at several places, especially three nursery schools, a relationship which provides not only clinical cases but also opportunities for observation and treatment, and facilities for training. For the parent, the clinic not only provides an examining and treating service but also guides him in his normal responsibilities for his child and warns him of pitfalls that he is apt to encounter.

c. From the Standpoint of Program. In addition, there is a type of clinic or institute, such as Yale Psycho-Clinic, designed not so much for individual service with unusual cases as for research with normal children. Research is the prime essential; service is incidental. The object is rather to learn more about children than to advise about them, although necessarily a certain amount of educational work with parents and children is woven into their research activities.

Other independent community developments are, on the one hand, of the nature of child guidance clinics where the psychiatrist, psychologist, and psychiatric social worker jointly work on the problems of relatively few cases of children. Sometimes this or a modified form of it is associated with adult work in a general mental hygiene clinic. The Psychological Clinic in Louisville, Kentucky, is of this type. With the few cases studied and great intensity of the study, this type of clinic works most efficiently and extensively with parents and children indirectly.

On the other hand, there are the habit clinics, as operated in Boston, working on earlier and more circumscribed problems in greater number and with smaller staff (including the nurse) which see many parents and children. They can do much more with the direct approach to parents because of their numerous contacts and the simpler problems, but less with indirect education because of their relatively fewer cases involving the social, school, and court work. Since the habit clinic does use a briefer method of study, it is essential that it guard against the dangers of short cuts.

In spite of this attempt at classification there are no hard and fast lines between the types; they are types, and very few adhere entirely to type. They likewise all do some of each kind of educational work. It is largely a matter of stress. Aside from the path it takes, the intensity of the educational work of course varies further, depending on whether the clinics are part-time or full-time, volunteer or paid, stationary or traveling.

4. Clinic Procedure

a. Admission of Cases. Cases are referred from many different sources, but a large percentage comes from the various organized public agencies: nurseries, nursery schools, kindergartens, children's departments of general hospitals, juvenile courts, public

schools, and public health nurses. Private physicians and parents also apply directly for assistance.

b. Social Investigation. The social worker makes the first contact with the parent and the home and acquires from other sources, such as the physician or teacher, all the information which has any bearing on the child's program. She also investigates all possible facilities that ought to be utilized in the treatment of the case.

c. Physical Examination. Physical examination is the first and perhaps the most important aspect of any attempt at rehabilitation, whether it be child or adult. We cannot afford to assume that any groups of symptoms, whether they be physical or mental, have a functional basis until a careful clinical examination, with the necessary laboratory tests, has been thoroughly carried out.

The physical examination gives the parent and family assurance that a scientific approach is being made to the problem, even if the findings are negative. Frequently, it brings out some physical factor which is the cause, at least in part, of the patient's poor adaptation to life.

No well-trained physician would consider, for a moment, utilizing psychotherapy unless he had reasonable assurance that every possible organic condition had been determined.

The question of where this examination should be made—whether at the clinic or by a private physician or at some other medical center—is not important, so long as the one who is to treat the case has confidence that the physical examination has been carried out in a scientific manner.

d. *Psychological Examination.* The psychologist first sees the patient when he comes to the clinic. Besides giving an intelligence test, he makes a careful investigation of the child's intellectual life, and interprets his findings in terms of memory, judgment, reasoning, perseverance, and educability. The child's responses to practical and abstract situations are also evaluated. His learning ability, as well as the opportunities that his environment has furnished for learning, is given careful consideration. A psychologist is not simply a 'tester' whose findings are measured in terms of intelligence quotients. He measures and evaluates all factors which might affect the intelligence.

e. Psychiatric Interview. With the social history, the physical findings, and the psychologist's report before him, the psychiatrist

interviews the parent in an effort to secure more information concerning the specific behavior difficulty, as well as the attitude, knowledge, and behavior of the parent and other members of the family. With young children the psychiatrist cannot work as directly, but must depend more upon his contact with the parents. However, the psychiatrist meets the child, talks to him, and in the case of the child from three years on does a great deal of direct work with him.[1]

f. Interpretation of Findings. With all this information concerning the social, physical, mental, and emotional background of the patient available, a thorough study can be made of the problem. With the coöperation of the various members of the staff, the director correlates and interprets the material. A plan of treatment is outlined which is usually supervised directly by the social worker, who at all times has direct communication with the resources of the clinic and the child's environment.

5. Standards of Work

It is important that a superficial clearing up of symptoms be not mistaken for evidence of sound scientific work. One reason that preventive psychiatry has become more and more social psychiatry, one reason that hypnosis or suggestion or any of its less frank disguises—cults, fads, quackish practices—has not achieved the standing that its apparent results would promise, is that human behavior is recognized as a result of a person and a setting. Often the behavior problem may be cleared up by treating only the person. Such results are, as a rule, temporary, and the difficulties recur later in another form.

This is a danger that is apt to come with attempts to treat cases on any point of view short of an individual study. It is a danger to which imitators of habit clinics are peculiarly subject. In one such so-called "habit clinic," the children are regularly treated none too gently with hypodermic injections of sterile water for everything from stammering to enuresis. Such forms of camouflaged punishment and suggestion have a minus value to the child

[1] For a detailed report of an interview between a psychiatrist and a parent see Thom, D. A. *Habit Clinics for the Child of Preschool Age.* Washington, D. C.: Children's Bureau, U. S. Department of Labor, Publication No. 135, 1924, pp. 6-11.

and the parent and are injurious to the fine type of work rendered by real habit clinics. The habit clinic is a great opportunity for the pediatrician to bring psychiatric progress into his special field, but he must be a careful pediatrician. In places, *e.g.*, Minneapolis, this opportunity has been realized and the service developed to quite a considerable degree.

6. Technique of Educational Work

Whether direct or indirect, the educational work of a clinic has a certain limited set of techniques. For professional education such as our institutes conduct, the method of the interneship (supervised practical work) or of the graduate student (a prescribed program) is largely employed, whereas other clinics have only limited need for these methods. The educational work of a clinic is done chiefly through clinical case work, through lectures, or through printed publications.

a. Clinical Case Work as a Means to Education. Special training methods are sometimes employed by the clinic in order indirectly to deal with a child or a group. Where a special disability is discovered through the clinic examinations, *e.g.*, special reading defect, it is sometimes possible for the clinic to carry out or supervise the carrying out of corrective tutoring. Speech correction work is similarly conducted. The waiting room of the clinic gives opportunity for special recreational training. All these yield results, not only through the child who is playing and the parent who is watching, but also through the volunteers and others who are assisting the special worker. The Children's Health Class at Mt. Sinai Hospital, New York City, conducts a special kindergarten in which the training methods are given attention and are brought directly to the attention of parents. Through health classes these and other problems are brought directly before a large number of variously interested people.

Considering the small number of cases that are examined in some clinics, it is evident that some other motive than mere clinical service exists. This motive lies in the educational opportunity that is found in handling the case. The examination and treatment outlined for the patient bring to the family the things that the clinic considers important for the healthier idea of family relation-

ships and family life. When the clinic calls upon the teacher for assistance, its explanation of the patient's problem and of the part that the school can take in improving the patient's mental health influences the teacher not only in behalf of the child in question but also in behalf of all of her children and of the atmosphere and organization of her classroom. This, of course, assumes that the clinic has successfully coöperated with the teacher. What is said of the teacher may be said of the whole staff of the school. In its contacts with the social worker, the clinic similarly handles for the agency one situation of which there are many duplicates constantly arising in the agency's work. With the court and with the family physician, the clinic makes the case do an educational job in exactly the same way. Even beyond the list of facts and mental hygiene principles dealt with in an individual case, an interest is stimulated which results frequently in further spontaneous study on the part of the parent or professional worker. It may be said that everyone who is called upon to discuss or help treat a case is subjected to an educational attack.

For a more extensive and deeper contribution the clinical case conference offers an effective educational instrument. In the clinical case conference a psychiatrist, psychologist, and psychiatric social worker bring together their studies and interpretations, unify them, and draw from them a common approach to treatment. Parents are practically never brought in on these conferences, rarely are friends. Frequently, professional workers come not only to listen to the discussion but to contribute to it as well. All those who attend these conferences from the outside have thereby an opportunity to appreciate the value of the different approaches that may be made in the examination of a case, the different interpretations that are possible, and the plans of attack that are drawn from them.

A more formal case conference is sometimes organized. This is not just a routine step in the case procedure, but is designed for teaching. A case already fully considered is selected for discussion again because it contains interesting features and because the case can be selected for peculiarities pertinent to the group to which it is presented. This presentation may be of the same form as the clinical case conference, or it may be the basis for a round-table

discussion or seminar, a quiz or a lecture. At times several cases are used together to bring out several aspects of a certain point.

b. Lectures. Lectures are a favorite method of educational work by clinics, and parent-teacher associations are the groups to which these lectures are most frequently given. The lectures may be explanatory of the clinic's working; they may be a general review of the aspects of the child's or parent's problems most pertinent to the group addressed, or they may be an extensive effort to drive home a single point.

The radio is coming to be used more and more for this purpose. There is some question as to how much is gained by these occasional lectures. The greatest value probably lies in the interest they excite rather than in the equipping of the members of the audience to deal better with their children or with their own personal problems. Such lectures might well be followed by directed study which will take advantage of the interest stimulated by the first talk.

Course lectures can be directed better than single ones toward carrying over a certain point or group of ideas. In one clinic, each parent is given an explanation of his child's problem and instructions for treatment, and other parents are present during this interviewing so that each of them hears some of the instructions given to the others. The detachment of these auditors from the case discussed makes it possible for them to think more objectively and thus to benefit considerably.

Sometimes the lecture courses are more definitely laid out and incorporated into a schedule of instruction in a college or school. Work along this line has been done with high-school pupils, not only dealing with their own problems but also preparing them to meet their future children's problems when they become parents. This educational work follows the lines common in general public health instruction. Mental hygiene clinics conducted in colleges, high schools, or preparatory schools have an obvious advantage for carrying out this sort of educational work. Doubtless, in many cases the pupil acts as an agent of the clinic in influencing parents, especially if literature accompanies the instruction.

c. Publications. Articles planned along the same lines as the lecture work are published as pamphlets or leaflets of the clinic or in periodicals. Certain of the magazines or newspapers reaching

parents run regular series of mental hygiene articles, and one periodical for school children carries a similar feature. These articles are largely the products of clinic work. At times, it has been found advantageous to have these written up by a layman who has talent for writing in a particularly interesting and revealing manner.

One clinic has developed an interesting series of cartoons, each of which drives home to parents in an unmistakable way a point pertaining to their conduct toward their children. The approach offers considerable opportunity for further development.

CHAPTER VIII

NURSERY SCHOOLS

I. Introduction

As the significance of the period of growth during the preschool years has become more apparent there has developed an increasing interest in establishing nursery schools.[1] A list compiled in 1924 showed a total of 28 nursery schools in 11 states, whereas the list at the end of this chapter, compiled less than four years later, shows 85 nursery schools located in 24 states and the District of Columbia. A study of these schools reveals wide variation in purpose and scope, in basic educational principles, in ideals and standards, and in working techniques, even though the ultimate aim of all is to contribute to the development of children and society.

The particular purpose in the presentation of the material in this section of the Yearbook is to give a comprehensive and accurate view of certain nursery schools as these are pictured in action, each typical of some one of the various schools organized for the benefit of preschool children.

It is one thing to give recognition to the educational significance of the needs of preschool children and to the importance of providing for them. It is quite another to give constructive help to a movement purporting to meet these needs. Such help is necessary and will be available for those most interested in advancement in the field of preschool education only when the same critical examination is given to nursery schools as is given to other experimental work in social welfare and progress.

If the purpose mentioned be kept in mind it will be obvious (1) why the general committee made the selection of the particular schools listed, (2) why there was need for setting up an outline which would secure from these schools the needed data concerning the application of their educational principles, and (3) why it was considered important to have these data in the form of direct contributions from those most responsible for the interpretation of the

[1] For a history of the development of nursery schools see Ch. II.

principles in operation and best fitted to give a description of the procedure in their schools.

It was with great difficulty that the general committee made the selection of the fourteen nursery schools. It believes that these schools fairly represent in type the scope of work being done by institutions organized for the benefit of preschool children. Selection was made on the basis of characteristic differences in aims, in conditions under which the schools operate, and in the form determined by these conditions. Quality of work was in no instance used as the criterion for the selection of any school. The study of the material from each school makes clear the purpose and distinctive features which characterize and define certain types. Priority of existence as an element in selection was given precedence whenever possible. This was done because the rapid growth in the number of nursery schools deserving recognition even during the period of this investigation by the Yearbook Committee made the matter of selection one of increasing difficulty.

The Committee felt that studies made of these contributions would offer unlimited opportunities for evaluating the work of each school and the comparative importance of each type. The effort has been to present a picture of the school in action. However, the important relationship which the purpose of a school bears to its practice and the effect of other conditioning factors on what it is actually possible to do, seemed to be necessary items to include in the data from each school. Each contributor was asked to use the outline listed below, suggestive of the minimum topics to be covered.

The contributors were instructed thus: "Use these suggestions as will best suit your purposes and as will emphasize the points which you believe are vital to the effective presentation of your work. We do not wish to have the topics which we have suggested limit you by indicating the organization of your materials."

SUGGESTIVE TOPICS FOR THE REPORTS FROM NURSERY SCHOOLS

I. Aims or purposes for which your nursery school was organized
II. The fundamental educational convictions or theses which find interpretation in the activities of your school
III. The plan of organization as it is reflected in
    a. The personnel of the staff
    b. The plan, playground, and equipment
    c. The program of activities

d. The teaching technics
e. The technics of coöperation with
   1. Specialists
   2. Parents
      (In this, please include such information concerning the types of homes of these children as will indicate the variation in economic and social status)
f. Other features affecting organization
   1. Entrance requirements
   2. Number of children enrolled
   3. Length of school day
   4. Number of children to teacher
   5. Age range in each group
   6. Bases for group classification
   7. Other items

IV. A brief descriptive statement and analysis of a typical learning situation in your school
V. Your point of view concerning the importance of records and the way you provide for checking up on the various aspects of growth
VI. The most distinctive feature of your nursery school or its outstanding contribution to the problem of early childhood education

It may be noted that there is some variation in following the outline. This seems of small importance, however, in comparison to the high points discoverable because of the fact that the writers were free to express their ideas with slight limitation.

The equipment lists, requested in the outline, have been reorganized and arranged in a composite form.

The promptness with which plans, once formulated, had to be carried through placed the contributors to this section in a position where there was little choice for them to do otherwise than assume the task. The splendid spirit in which all coöperated is genuinely appreciated by the Committee, which feels that had it been profitable it would not have been possible to secure and organize this material in any other way.

The Committee feels that the omission of the Nursery School of the Bureau of Educational Experiments in New York City from the list should be explained since it represents a type of organization different from any of the others that were included, and because it was one of the first nursery schools in the United States. The school was invited and urged to make a contribution, but it felt

that the publication of *Children in the Nursery School*[2] almost simultaneously with the Yearbook would make the section less valuable.

Owing to the limitation of space, it is possible to give only a brief summary. It aims to indicate some of the problems which should be considered as a result of this study, and to state some of the conclusions which might be tentatively formulated as guides to be confirmed or discarded in the light of the more adequate evidence to which they lead the way. This summary will be found at the close of this section.

II. Description of Selected Nursery Schools

1. Bowling Green Nursery School[3]

a. Purpose. Bowling Green Nursery School was organized in New York City by a group of Wall Street men as a department of the Bowling Green Neighborhood House.

The Bowling Green Neighborhood House was founded and is maintained for two purposes. The first was that of giving the very best available in physical and educational care to the people of the community. The second was that of providing a demonstration center to which those planning new educational projects might refer for help in budgeting, equipping, and staffing their enterprises.

Their aim was to combine the advantages of the nursery school with a day nursery for the Syrian children who compose the bulk of the nursery population. They desired that the children, from their early morning arrival until their return home in the evening, should be under the continual care of trained educational workers. This group of Wall Street business men, in their search for a means of realizing their ideals, turned for help in educational matters to the Child Education Foundation. The Foundation was invited to organize, equip, and staff their new nursery school.

This the Child Education Foundation undertook, seeing in it an opportunity to make concrete and practical certain ideals of the all-day care of the child by trained educators.

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[2] Johnson, Harriet M. *Children in the Nursery School.* New York: John Day, 1928. Pp. xx, 325.

[3] This report is a revision of the report submitted by Barbara Hitchings, Director of the Bowling Green Nursery School.

b. Basic Educational Principles. The Child Education Foundation believes in purposeful[4] material for little children. The child under three has not enough experience to devise work which will carry out a purpose as an older child or adult can do. Montessori materials are used to carry out this plan and to put into practice vital principles of character growth with very young children. Purposeful work is desirable because a sense of satisfaction comes from being able to complete a piece of work. This satisfaction is the foundation of courage in character, for when there is a possibility of accomplishing, it gives us an impetus to go on and to conquer the difficulties. Along with the Montessori materials, the Foundation believes in giving the child a chance to experiment with play materials, finding that creative work is greatly helped by this combination.

c. Organization. The all-day program furnished by the Bowling Green Neighborhood House provides many situations where it is possible to watch the working out of the principles just stated.

The nursery school maintains a permanent staff of five: a director, and two trained teachers, a part-time teacher, besides a nursemaid and cook. Through the affiliation with the Child Education Foundation Training School, the nursery school has the benefit of student workers.

The medical staff of the Health Center coöperates with the nursery school in giving the children thorough physical examinations once a month. Careful records are kept to show the change in physical condition. When necessary, children are referred to the special clinics for cardiac, nutrition, alpine lamp, or dental care. The nursing staff also coöperates in investigating home conditions and advising the nursery school of all homes where there are young children. They also check up in the homes where there are absences, and coöperate with the parents in regard to the physical well-being of the child while in the nursery school. Posture work is given by an expert to individual children recommended by the doctor.

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[4] The term *purposeful,* as the literature of the Montessori movement indicates, is here used to refer to the fact that the materials are constructed with a definite purpose in mind, *e.g.,* a form-board is so constructed that the child may learn to lace on it as an introduction to lacing his own shoes. The term *purposeful* is used by the Dewey school of philosophy to denote the child's purpose; *e.g.,* any piece of material is purposeful if the child uses it to satisfy a need in play life.—*Editor.*

Five rooms on the third floor are given over to the nursery school. These include a recreational room, a part of which is also the dining room. Here we find a very attractively furnished room with indoor play equipment: dolls and doll beds; carriages; dolls' wardrobe trunk with dress-up clothes; all the necessaries for playing house; toy automobile trucks; trace blocks; handwork materials—crayons, scissors, clay, etc. This includes almost anything a child needs for socialized play, besides reading tables with books, settees, and little nooks where the child can play by himself. The chairs and tables are made to fit the children. In the cabinets are Montessori and other educational material which the child chooses and works with independently during the school period. There is the cloak room where all the children have their individual hangers and each family has its own compartment. The bathroom has the very low plumbing and fixtures for tiny children, a baby's bathtub and two large mirrors hung just the right height for the children. Each child has his own space for a folded towel, washcloth, and comb. These are known by symbols which mark all his possessions. Meals for the nursery are prepared in a kitchen equipped in the most scientific manner.

The spacious roof off the sixth floor is used exclusively by the nursery school. Although seemingly hedged in by all the skyscrapers in lower Manhattan, it has, nevertheless, a wonderful feeling of space and openness. Each toy has its own place and is returned to that place when the child has finished playing with it. The children not only play on the roof but also sleep there the year round, under the open sky on pleasant days. The folding Detroit clinical cots are kept in cabinets made for them within the enclosure.

Since this is a day nursery, as well as a nursery school, the day extends from 8:30 to 5:30, giving opportunity for a varied program of activity. The children are admitted from 8:30 to 9:00 in the morning, and each child is examined by the clinic nurse before he goes up to the nursery school. The group from 16 months to 3½ years, which comprises the younger group, goes to the roof at 9:00 o'clock, having first had a dessertspoonful of unflavored cod-liver oil. At this time they make their beds for the morning nap. After the beds are made, they play until 10:00 o'clock, at which time they remove their shoes and put on Comfy slippers to sleep in. As each finishes, he sits down at the little tables and drinks a small

glass of fruit juice. No formal occasion is made of this because it is time for each child to get into bed as soon as possible.

Giving the younger group a nap from 10:00 to 12:15 helps the working mother solve the problem of putting the very young child to bed early at night. When the 18 months to 2-years-old child has had his nap in the morning (and he is always ready for it then) and has been active in the afternoon, he is ready to go to bed as soon as he gets home at night and needs no coaxing to go to sleep. The morning nap habit established at 18 months to 2 years carries over very successfully into the fourth year. However, it is difficult to establish the morning nap habit after 3 years of age, although it has been done successfully in individual cases.

As the children awaken, about 12:15, they get up, fold up the blankets and sheets, return them to their own places in the cabinets, and go down to the nursery floor to prepare for lunch. The children hang up their wraps, and as each child finishes, he puts on his shoes, washes himself, and combs his hair for lunch. It is interesting, indeed, to observe these mere infants removing their towels and washcloths from their individual places, squeezing out the washcloth, peering into the mirrors to see if they have washed themselves clean, and after they have finished, folding up their towels and replacing them on the racks. Since towels hung by tapes are not a life experience, the children are taught to fold and hang them carefully in their own places on a towel rack. Each child knows just what he is to do and goes about his work calmly and confidently.

Luncheon is at 1:00 for this group. The children lunch with their teachers at the little tables in the dining room. They set and clear away their own tables—an activity which demands a great deal of concentration and coördination of mind and body. As they finish, they go to the bathroom and make their daily bowel movement. Careful records are kept and are checked up with the mother. The children, after washing, are then ready for their school work.

The school period extends from 2:15 to 3:45. During this period the child has the opportunity to choose his work, and to carry through to satisfaction whatever problem he chooses to work on without interruption. Materials in the environment are brooms, dust-pans, carpet sweepers, dusters, pitchers for carrying and pouring water, bowls used for washing tables and other objects, and

brass polish. Besides these, there are folding and cutting materials and Montessori materials given according to the principles which they make practical. The directress is always ready to help when requested or when she sees she is needed.

Next comes a twenty-minute music and rhythm period in the recreation room; then it is time to prepare for supper. Two from this group set the supper tables every day. They learn to place the doilies, glasses, and plates from their small trays. They pour out their own milk and place their individual napkin rings in their proper places. While this is being done, the other children play with toys or look at picture books. At 4:30 supper is served. When they have finished and cleared their tables, they go into the recreation room until their parents call for them.

The children from 4 to 5½ years enter and are examined by the clinic nurse from 8:30 to 9:00. After their dessertspoonful of cod-liver oil, they go into the school room (in charge of a senior student of Child Education Foundation), beginning their work at once. At nine o'clock Bentley rhythms and music are given to all who want them; those who do not continue their work. The older ones have a responsibility of keeping some part of the environment in order. This responsibility is chosen once a week and gives the feeling of ownership and power over the environment. The rest of the morning is spent working with Montessori and other educational material. At 11:00 three children from this older group put on their aprons and set the tables for all the children for lunch. From a cabinet where all the dishes, silver, glasses, etc., are arranged so that they can get them themselves, they select just the right number of each article necessary to set their own tables. They take turns each week, so that every child in the group has his turn setting the tables. As soon as the dinner is ready to be served, about 11:45, they carry the bowls on their trays to the individual places. If they want second helpings, they serve themselves to whatever of the dinner they wish. They clear their own tables; then each child puts on his hat and coat and goes by himself up three flights of stairs to the room. Here, under supervision of a teacher, he finds his bed, sets it up, and goes to bed. The afternoon nap is over at 2:30. When the shoes are laced and beds put away, he plays with outdoor equipment until it is time to prepare for supper at 4:00.

The parents are free to come in at any time to talk over problems with the director. They usually take a few minutes when they come for the children. Most of the parents are foreign born—Syrian, Greek, Slovak, Irish, and Armenian. They must place their children for the day where they will be well cared for, so that the mother can increase the family income. We have no regular mothers' meetings; it is through the children themselves that we reach the mothers.

The children are admitted because of economic, health, behavior or home-problem needs. We require a physical examination at the Health Center. In our interview with the parents before the child enters, we find out why the parent wishes to send the child. In most cases the need is purely economic; in other cases the mother does not work, but realizes the advantage that the child will receive in the nursery school for development socially and physically. Often, the mother is mainly interested in having the child learn English. A nominal fee is charged, according to the economic status of the family. These fees rarely exceed a dollar a week. We urge regular attendance, ask that the child be accompanied by the parent in the morning, and that he stay until the child has been examined by the nurse.

We have equipment for fifty children. The groups are classified according to their mental age as far as possible. The younger group, ranging from 16 months to 3½ years, has a teacher and students; the older group, ranging from 4 to 5½ years, has two teachers and a student.

d. Typical Learning Situation. At 16 months the children begin to make their beds. The light canvas cots have casters on one end, so that by taking hold of the legs at the opposite end the children can roll the beds easily to their own places on the roof. They learn the places very readily, as one bed goes on each side of a door into the enclosures. When the beds are in place, each child takes his own blankets from his space in the cabinet marked with his particular symbol and carries them to his bed. Then just one corner and then the other of the green pad which wraps his blankets is unfolded and the blankets placed on a chair which the child has put at the foot of the bed. After he smooths all the wrinkles from the green pad, the sheet is placed in its right place

on the bed, and by grasping the corners first of one side, then of the other, it is spread out. Now the heavy woolen blanket is placed just right or it gets badly wrinkled. So, with great care, the edges of the blanket are put on the bed the right way and it is so unfolded that it covers the bed and does not hang down too far on the side. Turning down the top so that it will be all ready to get into, adds the final touch. When the chair is folded and put into place, the child is off to play with the other children.

Of course, the perfectly made bed does not come with the first trial or the second, in many cases, especially with the very young child, it takes weeks, even months, before he reaches perfection. The child is shown, step by step, exactly how to unfold and fold the blankets, then left to do as much of it as he can by himself. The directress is always ready to help when she feels that the next step is more than the child can carry through. But what satisfaction the child feels when he finally masters it and can make his bed completely himself.

e. Records. Records give both the teacher and the parent opportunity for a fair and accurate check on the growth and progress in habit-formation of the child. By recording his responses to situations over a period of time we are better able to understand him and to meet his needs. An accurate record of the length of each child's concentration is kept, not only as an indicator of his mental power, but also as an important factor in his personality make-up and his behavior. Records also give the teacher a chance better to follow the progress of the group. Records are kept of the school work of the individual child, his reaction on the roof during the play-time, the time he goes to sleep and awakes. Food records have been kept, showing whether the child eats all his dinner or a part, and whether he eats it with a relish. For the individual records we use the daily, weekly, and monthly cards compiled by the Child Education Foundation. For a group record we keep the charts compiled by the Child Education Foundation, the "Aims and Purposes Chart for the Habit Formation of the Pre-School Child."

f. Distinctive Feature. Perhaps the most distinctive feature of our nursery school is that it furnishes the educational advantages of the nursery school and at the same time fulfills the economic need

of the day nursery. Another feature is that every child has a full half day outdoors and sleeps outdoors the year round.

The atmosphere in this nursery is of a group coöperating happily and with entire lack of self-consciousness. It seems like a large, happy, and peaceful family. There is a feeling of a relaxation and poise throughout the school which comes only from making one's own decisions and that inner satisfaction of having carried work through to completion.

2. The Cambridge Nursery School[5]

a. Purpose. The Cambridge Nursery School was organized in the spring of 1923 by a group of Cambridge mothers who, seeking to provide for their children the most intelligent care at all times, were impressed with the significance of the Ruggles Street Nursery School of Boston. Following the three months' trial period in a private house, which convinced them of its educational and social value, a simple building with adequate play space was acquired at 16 Farrar Street. This served until 1926, when a second group was formed to meet the increasing enrollment and to meet in some degree the problem of transportation.

b. Basic Educational Principles. The education of children of nursery age means guidance into good habits. Such guidance can be accomplished only by studying each child individually. Nursery schools aim to assist parents in the guidance of their children by making available the knowledge and judgment which their directors have gained by studying and experience with many children. They also assist by providing an environment in which habits of self-control, self-development, and self-expression are most easily formed.

The Cambridge Nursery School offers mothers an opportunity to secure: first, association for their young children with others of the same age; second, the most intelligent assistance in the care of their children; and third, more knowledge of their children gained by observation of them in a group, and by an interchange of experience with other mothers.

c. Organization. Each school is in charge of its trained director, assisted by students in training from the Nursery Training

[5] This report was written by Florence Eaton, Director of the Cambridge Nursery School.

School of Boston. A child specialist examines and reports twice yearly on the physical condition of the children, suggests treatment when necessary, and makes decisions in doubtful cases of contagion or quarantine. The school staff does not include a nurse or a psychiatrist. The daily inspection which would be given by a nurse is considered to fall within the duties of the directors, and consultation with psychiatrists is suggested to parents as the need for extra help with behavior problems arises.

The school building on Farrar Street is a simple bungalow, facing the south, surrounded by a fenced play yard. In mild weather the program is conducted almost wholly outdoors. When it is necessary to be indoors, the closely-set series of casement windows on the long side of the playroom are opened to admit the maximal amount of fresh air and sunlight. The second school group, just completing its second year in a private house, has adopted plans for similar building to be erected by September, 1928.

In the yard, a sand-box, junglegym, slide, seesaw, stout trench shovels for use in the big "dig hole" in one corner of the yard, and a playhouse offer facilities for vigorous exercise, which is encouraged in alternation with quieter work.

The day's program includes a morning circle with general conversation on subjects suggested by the children, a music period in which nursery rhymes are dramatized and games played. There is also opportunity for free play with the larger apparatus, such as carts, slide, and junglegym, and a period of occupation with blocks, pegs, beads, scissors, paste, clay, pencils and large sheets of paper, saws, hammers, and nails. Before the mid-morning lunch the children wash their hands and set the tables, with as little assistance as possible. At table they pour the milk and pass the crackers; afterward they clear away and wash the dishes. Personal responsibility is developed by giving each child a locker for outdoor clothing and a place of his own for his towel and drinking cup.

Because it is fundamental that children learn by doing, the environment and materials are provided which will stimulate them to the most desirable experiences. The function of the teachers is to guide the ensuing activities into the proper channels. The children choose their own activities and carry them out as far as possible. When necessary, they are aided in their accomplishment by occasional suggestions, approval or disapproval, and en-

couragement. The children feel a proprietary interest in the school, as co-workers, and advantage is taken of every desire for self expression along lines helpful to the group. The program, which is steady and only occasionally varied, brings repeated experiences which teach in themselves, with a minimum of assistance from adults. The only discipline, other than logical consequences of a deed, is temporary isolation from the group. This makes clear to the child the fact that he is not only an individual but also a member of a social group, with responsibilities as well as privileges.

When a child is enrolled at the school, the mother becomes a member of the corporation, and as such accepts a responsibility for its policies, its interests, its activities. Three general meetings are held during the year. Intermediary business is conducted by an executive committee chosen annually.

Each mother of a child in the school has simple, definite duties. Once a week she spends half a day as an assistant to the director, sharing in the regular routine, watching the methods used and the children's reaction to them. Once a month she spends part of an afternoon, with the director and other mothers, in discussion of problems of child care. Early in the year the mother chooses subjects which interest her and which she may keep in mind while observing at the school. Papers are written; books are reviewed; and the discussion which follows is purposeful. These active responsibilities are considered obligatory by the executive committee.

Fifteen to eighteen children are accepted in each group. The director, assistant, and mother-assistant are present daily. The session is from 9:00 to 12:00, five days a week. In the afternoon the children may return for supervised free play at any time from 2:30 until 5:00, after they have had a satisfactory rest at home. The children range in age from two to five years, with a group division of the four- to five-year-olds.

d. Typical Learning Situation. Tom, aged three, deliberately broke up a puzzle made by Jack, aged four, who was saving it to show his mother. Jack was much distressed. Miss W. told Tom it was an unkind, unfair thing to do, to spoil another's work, and asked him what he could do to make Jack happy again. He voluntarily went to Jack, said, "I'm sorry, Jack," and began to assemble the pieces. Jack preferred to re-make it himself; so Tom simply turned all the pieces right side up for him. The following day

Tom asked for a puzzle and, when half through, came running to Miss W., who had handled the situation the day before. "You won't let anyone spoil my puzzle, will you?" he asked. Miss W. assured him she hoped no one would be so unkind and that she would try to see that nothing happened. So he went back to work.

Tom is slowly learning self-control and consideration for others. The successful point in this type of situation has been found to be the stressing, not of his delinquencies, which are legion, but rather of the feeling that, as a member of the group, he can expect consideration and coöperation from the other. In this way Tom is gradually realizing that this desirable attitude of the group toward him is the right and most worth while attitude for him to hold toward the other children. Instead of being left with the non-constructive feeling of having added one more to his list of transgressions, he carried away, and now builds upon, the positive idea of kindness and thought for others.

e. Records. The Cambridge Nursery School is of the coöperative type and feels its aims are reached without the intensive records which naturally form an important part of the laboratory or research type of school. The belief is held that records should be secondary to the natural play life of the child, that they should be made only when it is possible to do so without making his life restricted or artificial, that the child is not brought into this particular group for the purpose of making records. However, in a simple but adequate way, development is recorded.

The school physician keeps records of his examinations in October and May and sends a letter to the parents telling of his findings and recommendations. Reports recording development of habits are made out three times a year and a copy given to the parents. These reports are organized under the main headings: control of body, control of matter, speech sense development, emotions, higher mental powers, moral and social attitudes. Conferences between director and parents follow the issuing of these reports. These serve to strengthen the relationship of home and school influences surrounding the child through his whole day. Besides these conferences, there is an almost daily interchange of ideas between the director and the mothers when they bring the children to school and later when they call for them. These con-

tacts have proved to be of inestimable value to teachers and parents alike.

f. Distinctive Feature. The most distinctive feature of the Cambridge Nursery School is the active part played by its mothers. The school is created, not to relieve parents of their responsibility, but to develop them in it. It is a social as well as an educational venture, and parents invariably are convinced that their homes and their children are gainers because of it.

3. Nursery Schools of Cleveland Day Nursery and Free Kindergarten Association[6]

a. Purpose. The aims for which the Gowan Nursery School and the Samantha Hanna Nursery Schools were organized are: first, to provide for the establishment of habits which would further the physical and mental development of the preschool child; second, to coöperate with the Cleveland Kindergarten-Primary Training School in providing a school where students in training may observe and do practice teaching.

Early in the history of the Cleveland Day Nursery and Free Kindergarten Association, with the help of experts in the field, kindergartens were organized in all of the day nurseries. Being able to observe this age level closely, the members of the association came to realize that the years previous to entrance into kindergarten are most important to the child. These are significant years in which to form desirable habits that will further physical and mental development.

They also recognized the fact that it is important that the child shall be under the guidance of trained workers if such habits are to be established. They turned to the nursery-school teacher as one best trained for the work. Accordingly, nursery schools were established. As the kindergartens were also training centers for the students from the Cleveland Kindergarten-Primary Training Schools,[7] the nursery schools were organized in a similar way.

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[6] This report is a reorganization of the material written by Gertrude Burns, Instructor in Nursery School Education, Western Reserve University, and Director of the Gowan Nursery School; assisted by Amy Hostler, Assistant Instructor in Nursery School Education, Western Reserve University, and Director of the Samantha Hanna Nursery School.

[7] Now a part of Western Reserve University.

The Gowan Nursery School, established in 1922 in the Louise Rawson Day Nursery, and the Samantha Hanna Nursery School, opened in 1926 at the Perkins Day Nursery, are nursery schools which provide for the development of the child from two to four or five years of age and for the training of teachers for nursery-school work.

b. Basic Educational Principles. Recognizing that each activity in which the two- to four-or-five-year-old child engages is educational to him, it is essential that he be under the guidance of adults who are trained in methods of teaching as well as in child psychology and child care.

A wholesome environment with carefully planned materials provides stimuli for mental development. A well-planned daily routine aids in habit-formation. The child's physical needs are met by providing nourishing food, space, play in the open with plenty of apparatus for physical activity, and a regular time for sleep.

He makes social adjustments in life situations where children share and learn to give and take with others of their own age. The child's emotional life is protected by the day's routine in a happy undisturbed atmosphere. Materials and equipment are selected for all-round physical development and also for the stimulation of mental activity at this age-level.

c. Organization. The directors are teachers of experience in kindergarten and primary grades as well as in critic work. One holds a master's degree with additional study in nursery-school education and psychology. The assistants are graduates of the Training School, having done practice teaching in nursery schools, kindergartens, and the primary grade. Students in training spend twelve weeks during their senior year in practice teaching in the nursery schools. Nurses from the School of Nursing, Western Reserve University, in their last year of work, as well as affiliates of other nursing schools, *e.g.*, Blodgett Memorial in Grand Rapids, Michigan, receive a part of their training under the direct supervision of the directors of the nursery schools. The nursery maid is a resident of the day nursery but under the supervision of the nursery-school director. A maid is employed for cleaning the nursery schools.

Each school has an entrance hall, a playroom, bathroom, and kitchen. The Gowan Nursery School has also an enclosed sleeping porch with individual Simmons beds. The Samantha Hanna Nursery School uses the Merrill-Palmer folding cots.

In the hall are lockers for the children's wraps.

The playrooms are large attractive rooms having many windows with south and east exposures in the one, and south, east, and north exposures in the other. There are cupboards with broad shelves for the children's use and closed cupboards for supplies. The floors are covered with battleship linoleum. In one room an open grate adds cheerfulness. Small, low tables and chairs, rockers, a piano, and a victrola complete the furniture equipment. The large pictures are hung on the level of the child's eye and are in the form of gaily-colored poster effects.

The kitchens, large enough for children to enter without interfering, are equipped with ice-boxes, hot plates, sinks, low shelves on which the children may place dishes, and both high and low cupboards. This equipment is adequate, as all food is prepared in the large kitchen of the day nursery.

The bathrooms in each school have three low seats and lavatories, and one lavatory for adult use. There are showers connected with the tubs. Of the two tables, one is where rectal temperatures are taken each morning; the other is where children are dried after the bath and where manicures and pedicures are given. Steps lead to the tables. Low chairs are placed where children may sit while dressing. A hamper holds the soiled clothes until they are removed to the laundry.

Playgrounds are enclosed and reserved for the nursery-school children. There are garden plots with shade trees and shrubs. A small shelter house and a porch protect on wet or stormy days. The equipment consists of: junglegym, sand-boxes, slides, walking boards, seesaws, large hollow blocks, barrels, packing boxes, wagons, sleds, a rocking horse, rope swings, chair swings, and a low turning bar.

The daily program follows the following outline:

Arrival—Hanging up wraps.
Medical inspection.
A drink of water.
Toilet preparation.

(Some children are bathed. The outer clothing of all children is changed to hygienic cotton suits which allow for free physical activity.)
Cod-liver oil and fruit juice.
Free play in playroom.
Mid-morning lunch of milk and graham crackers.
Play out of doors if weather permits. Otherwise play in room with various uses of materials, as wheel vehicles, sand-box, peg boards, paper, scissors, paste, tea sets, doll corners, etc.
Dinner preparation.
Room or playground in order.
Toilet preparation.
Tables set.
Music or stories.
Dinner.
Preparation for sleep.
Sleep.
Dressing.
Supper.
Play out of doors or in room until parents call for children.

The teaching techniques provide for:

1. An attractive homelike environment planned for child in order to decrease inhibitions.
2. Redirecting rather than repressing.
3. Providing opportunities for creative expression.
4. Setting example for imitation but suggesting only when necessary.
5. Little adult interference, so as to allow for development of initiative and the assuming of responsibilities.
6. Stressing the positive and avoiding the negative.
7. Following necessary routine to form habits.

Coöperation with specialists is carried out in various ways. Ailments or symptoms are reported to the medical advisor on his weekly visits and any special treatment or examination is asked for. Cases for study or recommendation are referred to the psychologist, who reports the results of mental tests. The psychiatrist makes investigations for behavior problems and for causative factors and recommends specific treatment. The psychiatric-social worker makes home contacts through visits and conferences, and reports, by case studies, factors in the home that influence behavior. Western Reserve University provides specialists who plan menus according to children's needs, with due consideration for budget allowance.

Nursery-school directors meet the parents when they bring the children to school on their way to work in the morning. Parents are asked to fill out charts which supply data on home care. If behavior problems arise or if the child needs special care, such cases are discussed with parents when they call for children on their way home from work. Monthly parents' meetings are held at which talks on child care are given, demonstrations made, and round-table discussions held.

The homes from which these children come are for the most part broken homes. It is usually the mother who cares for the children. In most cases there are several children in a family. The homes are in tenements and apartments. One room may house three persons, or six rooms and a bath may be the home of four.

The educational status of parents ranges from no schooling in America to normal-school graduates.

Children are admitted from two years to four years of age at the Gowan Nursery School and to five years at the Samantha Hanna Nursery School. Younger children may be admitted at the discretion of the superintendent of the day nursery and the director of the nursery school. A complete medical examination is given before a child is admitted. The equipment provides for an enrollment of twenty children in each school. The time of arrival is from 6:45 A.M. to 9:00 A.M. Children are called for between the hours of 4:00 and 6:00 P.M. The average number of children to a teacher is three. The age range in the Gowan is twenty months to four years; in the Hanna, twenty months to five years and one month. There are no group classifications. The day nursery superintendents, who are graduate nurses, have charge of health examinations and control exclusions and isolations. Student teachers remain for morning session only. Only those children who are eligible for day-nursery care are admitted to these nursery schools.

d. Typical Learning Situation. Frances, who is two years old, walked up a plank placed on an incline. When she reached the end, she expected some one to help her down. No one appeared to notice her, even when she whimpered. Having to assume the responsibility, she turned around carefully and retraced her steps down the plank. She had solved her problem with satisfaction, as was evidenced by this activity, which became a game for her for several days following.

e. Records. The nursery school must be considered as a laboratory for research and as such it should furnish reliable data in the form of records. If we are to know children, we must observe them. Records of observations must be kept if they are to have practical value. All who take care of children have a share in their education. Then all should assume some responsibility in the keeping of records, for each supplements others. It is desirable that simple forms which are easily checked shall be used or record keeping will prove so great a burden that it will be neglected. Records provide concrete evidence by which we trace progress. By means of them we may be able to influence the public to a more conscious effort to provide properly for the younger child.

Diary records of children, which give complete pictures of their activities and furnish data which may be used in various other records, are perhaps the best kind to be kept. Data such as these are also charted: hours of arrival and departure to show time spent in school; the time and frequency of urination and defecation; weekly weights and monthly heights; daily temperature; baths and shampoos; amount of food taken, reaction to certain foods, social habits during meals. Data on home care and behavior are also gathered. The records of children's activities include evidences of dramatic play, forms of group organization, creative expression, and language development. From diary records we trace the beginnings of concern with subject matter, like interest in language, in stories, in music, in nature, and in number and its use.

f. Distinctive Feature. In an attempt to counteract the superficial contacts that we were having with our working mothers, a definite plan was made for parental education. The plan included monthly group meetings and informal individual conferences. The group meetings were in the form of supper parties, because we felt that we could not ask these mothers to go part way across the city to take a child home and then return to us. Those children who could not be called for by a relative or friend and cared for until the mother could get home were kept in a room at the day-nursery building. The mothers assembled in the nursery-school room. From the beginning we planned, and we still serve, a simple but nourishing supper at six o'clock. The mothers who finish work earliest come and help get the room in readiness by setting the

tables, dishing desserts, and arranging the salads. We find that after a comforting hour that contributes warmth, food, and friendliness, the mothers will meet us half-way in any discussion or in any requests that are made.

Various persons come in to talk with us at these meetings. The members of the behavior clinic connected with our own day-nursery association give us untold help in suggestions and in the talks they conduct from time to time. The mothers bring to us accounts of child life in the home which serve as evidence that to a certain degree our teaching methods are being transferred to the homes.

Some of the discussions deal entirely with the physical care of the child. At such times we have comparisons of food values, demonstrations of how to cook simple dishes to increase milk intake for the child, and even how to give a bath in the right way. We have clothing demonstrations and try various patterns of children's clothing. At other times we discuss individual problems dealing with discipline, punishment, enuresis, and other types of habit training.

At the Samantha Hanna Nursery School a simple form of organization was decided upon, with one mother chosen to be president. The Gowan Nursery School has recently undertaken a similar type of parental education.

If the nursery school and home can work together as has been demonstrated by the Samantha Hanna Nursery School organization during the past year and a half, then we feel that perhaps this will be our greatest contribution to the problem of early childhood education.

4. The Franklin School Nursery of the Chicago Public Schools[8]

a. Purpose. The Franklin Public School Nursery, located at 226 West Goethe Street, Chicago, Illinois, was opened in September, 1925, under the auspices of the Chicago Women's Club. This Club operated the first kindergarten in a Chicago public school. Visioning the nursery school as a future addition to public-school education, they wished to try a first public-school nursery to learn whether it was feasible and wise for a nursery school to operate within a

[8] This report was written from material submitted by Rose M. Alschuler, Staff Director of the Franklin Nursery School.

public school. Could twenty children eat, sleep, and play properly and happily in one room from 9:00 A.M. to 3:30 P.M.? Could one continuous educational program be evolved which would make for finer, fuller development of children. Would the nursery school in time modify public-school procedure and in how far need, or should, nursery-school procedure be modified to adapt it to a public-school situation? To what extent were parents of the somewhat underprivileged group in which they were working educable, not superficially as to procedure, but fundamentally as to point of view.

b. Basic Educational Principles. Fundamentally, the educational aims are not essentially different from those of other nursery schools. Probably most persons working with young children are trying to develop strong young bodies, sound emotional make-ups, and the freedom for the individual that will come through a sense of security and that can express itself through generally developed strengths. Franklin Public School Nursery may perhaps differ from other similar groups in the fact that, while opportunity is offered for varied experiences with music, materials, and equipment of all kinds, no effort is made to channel energy along any given lines. All learning situations are informal.

The staff considers habit and routine as a means for comfortable living together of people of any age, but believes they should not be stressed too strongly as objectives in the nursery school. Good habits and routine are justifiable in so far as the nursery school can create an atmosphere where good habits and routine are desirable to the child, but they are not justifiable objectives if they are obtained by adult pressure.

c. Organization. A problem which has challenged our resources has been that of working out a successful technique of coöperation with existent agencies. The Elizabeth McCormick Memorial Fund furnishes the services of a pediatrician, nutritional workers, and an anthropometrist to plan and carry out the health program. The Institute for Juvenile Research has furnished psychologists, physiatric social workers, and a psychiatrist as necessary. This staff, which belongs to the Preschool Branch of the Institute for Juvenile Research, has planned and carried out the mental health program. Both groups have given examining, consultant, and advisory service. An account of their programs and of the integration of these two staffs and the nursery-school staff into one unit appears further on.

The personnel of the staff consists of a part-time staff director, a teaching director, an assistant, and two student teachers who are in training at the school. The nursery-school staff plans the educational program, daily procedure, and general procedure with parents and children. This program is not only open to modification, but is very often modified by suggestions from the staffs of the two organizations coöperating. Members of these staffs are frequently at the nursery school and are thoroughly familiar with the children, their families, and the situation in general.

The nursery-school staff was not organized primarily for research. It has, however, tried to maintain a research attitude—one of constant testing, modifying and developing, as necessary, their program, materials, and techniques.

As the years have proceeded, the staff finds itself less dogmatic, more attentive to the child's unexpressed needs, less programmed in thought and detail. At the beginning three years ago, fifteen- to twenty-minute periods were established daily for rhythm and stories; there was a ritual for the morning orange juice, *i.e.*, tables were set and everyone waited for everyone else. But now the large rhythm of the child's needs is sensed and the program recognizes in general only the needs to eat, sleep, and play, and has become altogether more elastic.

Twenty children were enrolled at the beginning of this year. Three were sent on in February because they were over four years old. Conditions—sense of repose, for example—were bettered by having seventeen, rather than twenty, children in the room; so the enrollment will be held down to seventeen for the rest of the year at least. The question naturally has arisen: is seventeen intrinsically a better number than twenty, or could twenty children get along equally well if a larger, more adequate school were provided?

In our present program most of the children are outdoors during most of the morning. Individual differences are noted, and variations, such as shorter outdoor periods for some children and mid-morning rests, are introduced as necessary. Two directors are on duty daily from 9:00 A.M. until 3:30 P.M. At times there has been but one student teacher. The directors believe this staff hardly adequate for obtaining maximal results in establishing habits; *e.g.*, bathroom routine and the putting on of wraps have to be done so quickly that the children cannot be trained to be as independent

as when more adults can give longer and more specific attention, thus helping each child to help himself.

The physical layout consists of one large schoolroom 30 feet by 30 feet of the usual public school type, with three large windows along the east wall and one door leading to a platform and outside stairs which in turn lead directly to the enclosed nursery-school playground below. The dressing room, 30 feet by 5 feet, houses the children's wraps, blankets (which are suspended), and cots (which are folded away when not in use). The bathroom contains two toilets and two lavatories. The only especially interesting indoor equipment is a large-muscle apparatus, which consists of a standard and a cross-bar placed about six feet above the floor. This cross-bar pegs into the wall, and from it are suspended rings, a swing, and stirrups. The children are thus afforded large-muscle play indoors on apparatus easily swung into place and again put away. A sand box has been built 8 feet by 6 feet. When its sloping tops are closed, the children can climb up one side and slide down the other; when open, the top pieces rest level with the sides of the box, so that the children can sit on them and play. In developing materials and equipment the public-school point of view, with need for economy and easy duplication, has been kept in mind.

The children of the Franklin Nursery School are all of foreign-born parentage, principally Italian and German.

The age range of children accepted is from 24 to 42 months. Soon after the children are four years old, they are sent on to the public-school kindergarten in the same building.

The average wage of the fathers is $25 to $35 per week. In several families the mothers are the sole wage earners. As a group, the parents are self-respecting, intelligent, and reliable people, interested in their children and generally coöperative. Of the twenty children in the group this year, ten were referred to the nursery school by the psychiatric social workers of neighboring infant welfare clinics; one by the Institute for Juvenile Research. All were sent because of specific needs, such as feeding difficulties, tantrums, etc. In practically all cases adjustment is being effected in the nursery school, and reasonable home coöperation is being sceured.

In the course of the year all parents are asked whether their children are getting dental care. As most of them are not, arrangements are made through the Elizabeth McCormick Memorial Fund,

and with the permission of the parents, to provide all children with dental examinations, prophylaxis, and fillings at a very small charge.

Conferences are held regularly with parents. Mothers are asked to come about four times during the school year; half an hour is allowed for each appointment. This year a nutritional worker and physiatric social worker have visited every home and observed the home relationships, the child at play, at luncheon, and starting his nap. This more thorough knowledge of the home situation has given much better insight into the problems of handling the child and has greatly facilitated the coöperation between the home and school. In addition, about three evening meetings are held during the year with the fathers and mothers. These meetings are partly social and partly educational. Usually there are discussions of physical hygiene or typical behavior difficulties.

In order that the standard of care which the nursery school tries to create during the school year shall be maintained during the summer months, and also because the nursery school wants data on what happens to the children during vacation time, one day is appointed in July and one in August when a member of each staff comes to the school and offers to meet parents and children. These conferences are voluntary, but a definite time is appointed in advance where desired. Weights and heights are noted, and general behavior and problems are discussed. Practically all parents of children in the school who are in town come for these conferences.

As to the educational process, every member of the staffs recognizes the interdependence of mental, emotional, and physical factors, and contributes from his special angle to the total point of view. As before stated, the Elizabeth McCormick Memorial Fund conducts the physical health program, which includes physical examinations by a pediatrician, monthly checking of weight and height, and the taking of a number of other anthropometric measurements at the beginning and end of the school year. The planning and supervision of the dietary by a nutrition specialist, and an advisory service to the school concerning equipment and program as they may affect the physical development of the children, are also included. In addition, a very important part of the Fund's work is the education of the parents through occasional group meetings, but more particularly through regular individual conferences at which

the pediatrician, the nutrition specialist, and the teaching director discuss with the mother the progress and special needs of the child. The Fund is also conducting studies of the physical development of preschool children and of the conditions that affect it. It is hoped that the data being gathered may both help to determine standards of physical development and performance and also contribute to the evaluation of nursery-school procedure in its relation to the health of young children. In so far as the general program can be separated, as before stated, the Preschool Branch of the Institute for Juvenile Research directs and carries the mental health program. This service consists of taking a social history for every child, individual psychological tests, psychiatric observations where advisable, advice to teachers and parents in regard to methods of training, behavior, and personality problems.

In order that the activities of the various agencies coöperating in the work of the school shall be integrated, monthly joint staff conferences are held in the offices of the Preschool Branch of the Institute for Juvenile Research. This is a routine service given to all nursery schools in which the Institute for Juvenile Research is working. Matters of mutual policy are discussed at these conferences, but their chief purpose is to discuss the development of various cases at intervals during the year. The social history and family background of the child are presented by a psychiatric social worker of the Preschool Branch of the Institute. Physical and nutritional data are reported by a pediatrician and a nutritional worker of the Elizabeth McCormick Memorial Fund. Test results and observations on the behavior of the child are presented by a psychologist and a psychiatrist of the Institute staff. The nursery-school director presents a detailed report on the child's personality and behavior in the nursery school with a summary of his outstanding needs and problems. General discussion ensues, and as concrete a program of recommendations as is possible is set forth for both the home and the nursery school. Each agency is held responsible for carrying out the recommendations that lie in its field of work. The recommendations later come before the conference for review every few months. By this coöperative method a personality study of each child is being made. A detailed record is kept for each child, most of which is filed in triplicate, one copy in the nursery-school files, one in the offices of the Elizabeth Mc-

Cormick Memorial Fund, and a third in the files of the Preschool Branch of the Institute.

In addition to this major program of work thus outlined, the Institute carries on special research studies in the nursery school, such as a series of psychological tests, observations on habit, and special observations on each child's behavior. Before the child is accepted in the nursery school, the mother is given a typewritten questionnaire to fill out. This supplies information valuable to the nursery school in its first contacts with the family and the child. The information covers household and household personnel, simple developmental history, record of past illnesses, and some facts on habits of eating, sleeping, and manner of discipline.

d. Records. Detailed records of home visits are made. These are filed in individual folders with the initial questionnaires and psychological test results. In addition, there is filed the nursery-school directors' detailed summary of every child that is made out for staff conference, together with the ensuing discussions and recommendations; also, concise records of all appointed conferences between parents and staff. A continuous record carefully kept over a period of several years should indicate what difficulties are typical, what recurrent, what procedures were used and whether or not these were satisfactory.

e. Distinctive Features. It is a bit difficult to state the distinctive features of the Franklin Public School Nursery, as so many things that are developed separately by different organizations are the result of current thought and so develop spontaneously and simultaneously in different situations.

The demonstration of the use and integration of existent agencies for improved nursery-school service and techniques is probably the strongest contribution of this nursery school and is an experiment which can be duplicated undoubtedly in other communities where similar agencies exist.

Another significant feature is the public-school situation—the one room and the necessarily economical method of handling materials. Summer conferences, dental services, and occasionally hospital supervision of tonsilectomies and circumcisions when recommended, are an extension of school services not ordinarily given in nursery schools.

As nursery schools develop in other public schools, care should be taken to guard the experiments by limiting, for the present at least, the number of children in the group and the number of children per director, and also by avoiding crystallization of programs of thought and action before we are far more certain than we now are of the best way of meeting the needs of children of nursery-school age.

5. The Guidance Nursery of the Yale Psycho-Clinic[9]

a. Purpose. The Guidance Nursery was organized in 1926, as an adjunct to the service division of the clinic. Its general purpose is to provide facilities for the observation and guidance of young children and to develop flexible, individualized procedure for the guidance of parents.

Incidentally, the nursery provides observational and training opportunities for advanced students in the field of child development. The arrangements are made flexible to permit intensive work with significant cases and to aid in the defining of new methods of approach in child and parent guidance.

It has also been our purpose to demonstrate that certain types of work in the field of preschool and parental education can be economically undertaken in connection with kindergarten and other agencies, without the more elaborate provisions of a congregate nursery school.

b. Basic Educational Principles. All problems of behavior and training, whether in normal, atypical, or handicapped preschool children, require some degree of individual study and of individual adjustment. To a considerable extent these problems involve the home situation and the parent-child relationship. It is desirable, therefore, to reckon with the problems in an individualized manner, which will most directly and effectively reach the parental and home factors.

c. Organization. The staff consists of a part-time clinical examiner, a clerk, and a guidance worker. The clinical examiner makes the initial psychological examination of all children referred to the clinic. He gives special attention to those of preschool age, who are referred also to the nursery for observation and training.

[9] This report was made by Dr. Arnold Gesell, with the assistance of Bruton Castner and Katherine Backes.

The guidance worker gives her full time to actual guidance work with individual children and groups of children, to records of their behavior, to home visitation, and to conference with the parents.

Other members of the clinical staff, social workers, and student assistants, may participate in the working out of the individual guidance programs.

The practical arrangements of the guidance nursery are simple. They consist of a bright, homelike nursery with a fireplace, a small cloakroom with lavatory, and an outdoor play shelter communicating with a spacious play lawn. (The outdoor equipment consists of sandbox, slides, seesaw, ladders, carts, and wheeled toys.) Built into one corner of the nursery is a small indoor play pond. Built into an adjoining corner is an inconspicuous, but roomy observation alcove for the use of parents and other observers. This alcove consists essentially of a carpeted and draped room with chairs, and a screen partition which has the appearance of a solid wall when viewed from the exterior or nursery side. This screen is constructed of ordinary commercial wire netting (sixteen mesh), treated with several thin coats of white enamel paint on the exterior surface. Viewed from the nursery side this screen has the appearance of a solid surface. From the interior, however, it is sufficiently transparent to give the observer a view of the entire nursery.

The nursery is equipped with a varied assortment of toys, with large building blocks and other constructive materials. This equipment gives the child ample chance to display his traits and abilities both in independent and in social situations. There are abundant opportunities for him to work at problems requiring intelligence, motor coördination, conversation, and emotional control. The mother of the child may take a station in the observation alcove, which gives her a wholesomely detached point of view for following his behavior through the screen shield. It should be emphasized that the equipment is simple and that the essentials may be readily duplicated. Even the play pond is of very simple construction. It consists of nothing more than a shallow basin (four feet by six) made of galvanized sheet metal, painted marine green, and supplied with a central fountain. Planks serve as bridges, and the floating toys, the sticks to poke with, and the strings to pull, provide endless opportunity for constructive play.

A large observation room is not indispensable. The panels of the door of the cloakroom are also provided with small screens of construction similar to that already described. These smaller screens can be advantageously used by one or two observers.

There is no fixed program of activities; the procedure with the individual child is planned and carried out according to his needs, on the basis of the problems shown. There is necessarily, however, a certain minimum of routine through which each case passes. The initial visit includes first of all a developmental examination, which is followed by a period of observation in the guidance nursery. The introductory report, containing information as to family background and developmental history, as well as the parent's statement of the problem, is examined, and its details are amplified through an interview with the parent. There may be a visit to the home to confirm our impression as to the probable home background or to observe manifestations of problem behavior which occur only in the home.

On the basis of the information gathered through these various steps, a conference betwcen the psychologist and the guidance worker determines: (a) whether or not it will be desirable to follow thc case by means of further visits; (b) if so, how many visits are likely to be necessary; (c) how frequently they should take place; (d) whether thc child should continue to come alone, at least to begin with, or whether he should be seen with one or more other children; and (e) the methods provisionally decided upon for meeting the problem.

Whether he comes alone or with others, the child is introduced into the nursery situation in an entirely informal manner. Each child is required to do what he can toward the removal of outer clothing and hanging it up; but, these preliminaries over, his activities are permitted, as far as possible, to follow the line of his own interests. Interference and suggestions on the part of the guidance worker or any other adult present are kept at a minimum. This aim is materially aided by having the mother seated in the observation alcove already described, where the screen, while permitting her to observe all the activities, keeps the child ignorant of her presence and effectually restrains her tendencies to step into such situations as may cause her concern.

There are times, of course, when it becomes desirable for the guidance worker to take a hand, for the purpose of preventing accidents, adjudicating disputes, encouraging a hesitant child, etc.; or she may respond to the child's attempt to draw her into the play. Under certain conditions the situation which is likely to call forth problem behavior is actually presented in the clinic. Thus, a child who is referred on account of certain problems in relation to the feeding situation may be served luncheon in the nursery alone or with other children; one who is over-dependent upon the presence of the mother may have to undergo separation; or a child who is given to disobedience or temper tantrums may be faced with situations which bring out these responses. The mother is in this way given a concrete demonstration of how such problems are to be met or avoided. Then, in the conference with the mother which takes place immediately after the observation is concluded, the situation is gone over, the outstanding points emphasized, the differences between her own and our guidance methods brought out, and her confidence as to the possibility of her overcoming the problems strengthened.

This guidance procedure varies with each individual case. Typically, the different steps may be recapitulated as follows:

a. A request for an appointment and a consultation concerning a concrete report of the behavior problem. Usually the mother brings the child to the clinic on the first visit.

b. A psychological examination of the child in the service clinic.

c. Observation of the spontaneous behavior of the child in the guidance nursery.

d. A conference of the guidance worker and of the clinical examiner, which leads to the planning of a special guidance program.

e. Return visits of the child to the guidance nursery, once, twice, or oftener, a week.

f. Occasional return visits by the mother to give her an opportunity to observe the child and to learn, through the demonstration of the guidance nursery, the methods to be used.

g. Conference with the mother to show how similar methods may be used at home.

h. Follow-up visits of child and parent to continue guidance and supervision.

The parents, like the children, are, for the most part, seen individually. The guidance takes the form of consultation and conference rather than formal group instruction. The problems of

child management are discussed in terms of the specific child and concretely in relation to his reported behavior and his actual behavior at the clinic. Thus, the parent guidance and the child guidance are carried on conjointly in a natural context and in direct relation to a concrete situation.

As a vital part of our program of procedure in any guidance problem it is necessary that we have the entire coöperation of the mother, and it is only upon this understanding that we undertake to follow up a case. It has been our experience that the mother is usually willing to accept this stipulation and to carry out our suggestions as far as she is able; it seldom becomes necessary to drop a case because of any failure to coöperate.

An interview with the mother on the first visit furnishes us a background for laying out our procedure and enables us to make whatever general or specific suggestions we are in a position to give after the initial observation. Repeated conferences on later visits, in the clinic or, occasionally, in the home, serve to check the results of carrying out earlier suggestions, and enable us to keep in constant touch with the changing manifestations of the problem. The most valuable aid in this matter of parent guidance is the observation alcove already mentioned which allows for concrete demonstrations of our methods with the mother effectually removed from the situation as far as the child is concerned, and which at the same time fosters in her that attitude of detachment so important in her own management of the problems.

It has been our experience that many mothers, by the time they bring their children to us, have completely lost confidence in their ability to handle the problems presented by their children. It is important that the confidence thus lost be restored. Much may be accomplished towards this end by showing them that it is quite possible to effect control without resorting to drastic measures.

The Guidance Nursery, therefore, has no fixed enrollment like the ordinary nursery school. Its activities and attendance vary from week to week and even from day to day. The guidance worker has had a background of experience with children of both kindergarten and prekindergarten age. Sometimes she works intensively with one child; more frequently she works with small groups of three, four, five, or six children, usually from eighteen months to five years of age. The group classification rests on the special

social and guidance needs of the children. Their compatibility and the value of the reciprocal influence, from the guidance standpoint, rather than their actual ages, are taken into account in determining the pairs and groups.

The size and personnel of any particular group may vary from week to week; new cases are added or old ones dropped when the problem becomes one which may be taken over entirely by the home or when, as rarely happens, lack of parental coöperation indicates that there will be no profit in continuing the case further.

During the first twenty-nine weeks of the current clinic year, from September 5th through April 14th, there were seen one hundred different cases involving parent guidance. The distribution by age was as follows:

12	mos.	through	23	mos.	.....	3
24	"	"	35	"	.....	17
36	"	"	47	"	.....	11
48	"	"	59	"	.....	8
60	"	"	71	"	.....	9
72	"	and above			.....	52
		Total			.....	100

There were also 33 cases not of the parent-guidance type in which a clinical observation in the Guidance Nursery served to aid our understanding of the nature of the case. Of these, 26 were of preschool age. These include cases of adoption and children deprived of parental care.

On the average, fifteen parent-guidance contacts are made each week by the clinical-guidance service in this way throughout the clinic year. The usual length of time allowed for one visit is two hours.

d. Typical Learning Situation. A case selected from the current files, on which work is still going forward, will serve to illustrate the methods of procedure. Richard L., aged 19 months, was brought to us by his father on the suggestion of the family physician because of irregularity in eating, slow progress in talking, and some difficulty in general discipline. The developmental examination made at the time of the first visit indicated that the boy was of better than average intelligence, yet he showed a very poor quality of attention even for his age. Speech was a little retarded, but the conversational quality of his jargon indicated that there

was only a slight delay in this field, and that, once the regular use of words had begun, conversational ability would be likely to advance rapidly.

On the side of personality Richard appeared a cheerful, attractive child, responsive, and showing a good quality of interest even though it was not maintained for any great length of time in a single field. Separation from his father in the Guidance Nursery brought out a little initial timidity and one or two brief recurrences which were overcome by the guidance worker without much difficulty. As a result of the first visit it was decided (a) that no special effort need be made to bring on the development of language since this would probably be aided by the normal social contacts in the clinic, (b) that contact with other children would be an advantage and that after one or two more visits by himself he should come into a small group of other children not too much above his own age, (c) that on an early visit he should be served a luncheon with one or more other children and that his attitude towards eating should be observed at that time, (d) that the sort of behavior reported was probably the result of unwise home training and of forcing situations, such as feeding, at the wrong time, and that this should be the first line of approach in making suggestions to the mother.

On the second visit he was brought by his mother; the initial response indicated a strong dependence upon her presence. He screamed violently when she started to leave after bringing him to the nursery. Her departure was accordingly delayed a few minutes to improve his adjustment. He began to cry when she eventually left him, and although this first crying was soon overcome, there were occasional recurrences throughout the morning. On the third visit the same response was obtained when the mother first left him, but once the crying was overcome there were no further recurrences, and there was no repetition of the incident on later visits. The importance of not permitting too strong a habit of dependency to be formed was pointed out to the mother, who was showing the best possible attitude of coöperation in carrying out our suggestions in the home.

One or two experimental feedings in the guidance nursery with the mother watching from the observation alcove brought out no violent responses of the sort reported in the home. Some things

Richard would feed himself, others he would accept when they were fed to him, but there was no negative response to the food itself. A visit to the home during the lunch hour brought out clearly the difference between the response there and at the clinic. As a spoonful of food was presented to him, he shook his head, said "No, No," and put his hands in his mouth. The mother held his head back and forced the food into his mouth, which brought about stiffening and screaming. The food was finally swallowed, but the scene was repeated with each mouthful, so that after even a very small amount of food had been eaten, the child was in a highly tense and excited condition. This attempt of the mother to force the feeding was the result of a misinterpretation of her doctor's instructions. A conference between the guidance worker and the family physician straightened out this point, so that she realized that such forcing to get him to eat was not necessary. It was felt that much of the difficulty was due to the fact that the child became hungry somewhat earlier than his regular lunch hour and that by the time his food was actually ready his hunger had largely disappeared. Lunches given in the clinic at an early hour have seemed to confirm this idea, and it has been recommended that the set hour be changed to correct this situation.

Recent visits have shown, as we expected, a very marked improvement in talking, with frequent use of words in combination and even short sentences. The repeated observations have enabled us to make an analysis of the feeding problem and to make suggestions which we are confident will bring about improvement, for the difficulty has already become less marked. The over-dependence upon the presence of the mother which the child was beginning to show has been checked and seems unlikely to recur. The repeated conferences with the mother, who has proved to be most intelligently coöperative, have given her a clearer understanding of methods of training and renewed confidence in her ability to apply satisfactory methods.

e. Records. In order to understand the status of a problem at any given time, it is necessary to have records showing its history. Each history folder of the Yale Psycho-Clinic contains a face sheet on which statistical and identifying information from all sources is brought together. This face sheet contains also a brief clinical summary describing the nature of the case, the results of the de-

velopmental examination, and recommendations for handling the problem. To this are attached all original examination records, samples of the child's drawing, etc. In the same folder is kept the guidance history, which is typed on special forms. The distinctive feature about these forms is that they allow for the wide flexibility in recording which is necessary to fit the needs of the individual cases. In separate columns are recorded the dates of successive visits, description of the status of the problem, including brief accounts of the child's behavior, and a third column for comments on the method of procedure and estimate of the results obtained.

f. Distinctive Feature. The Guidance Nursery has demonstrated that it is possible to conduct certain forms of work in preschool and parental education on a dispensatory, or service-unit, basis. The organization and procedure are relatively simple and economical. They do not entail full-time attendance and the congregate type of school grouping. These procedures have the same individualized adaptability which characterizes a child health center, a hospital, or a modern dispensary. It has been shown that for many diverse types of child-development problems, *occasional* contacts with a guidance unit are effective. The results of occasional experience and occasional stimulation carry over; and, in spite of certain obvious advantages in daily attendance, such attendance is not necessary to accomplish positive results in the field of parent-child guidance.

It is suggested that a similar procedure and organization may be incorporated into kindergarten practice and into other fields of public health and public education concerned with young children, whether problem children or normal children. Because of its flexibility, individualized guidance represents a concept and a method of approach administratively applicable to many different situations in the field of preschool and parental education.

6. The Nursery School of the Institute of Child Welfare Research, Teachers College, Columbia University[10]

a. Purpose. The Institute of Child Welfare Research, one of the three institutes operating under Teachers College, Columbia

[10] This report was written by Grace Langdon and the staff of the nursery schools, Institute of Child Welfare Research, Teachers College, Columbia University.

University, fulfills a four-fold function: (1) that of a laboratory for research studies in child development, (2) that of an experimental situation in which an educational policy is being formulated, designed to meet adequately the growth needs of children on the two- and three-year age-levels, (3) that of a training center preparing students for nursery-school teaching or for leadership in fields of parental education, clinical procedure, and child guidance, and (4) that of a demonstration center for students from various departments of the University.

b. Basic Educational Principles. The major principles we conceive to be eight in number.

1. A child is daily confronted with many situations, to any element of which he responds not singly, but variously.

2. Through his responses to these many elements he derives a variety of meanings, which determine his outlook and outward behavior.

3. Education is concerned, then, with providing those experiences from which the most desirable meanings may be derived and with guiding the responses to the various elements of those experiences so that more and more serviceable ways of thinking and feeling, as well as of outward behaving, will ensue.

4. Ways of thinking, feeling, and behaving are serviceable to the degree in which they result in more effective living with others, in the building of better and better standards, and in the growth of a finer character.

5. Serviceable ways of thinking, feeling, and of outward behaving are the sum total of such separate techniques, habits, attitudes, and outlooks as make for (a) positive health—mental and physical, and (b) independent and acceptable living with others.

6. Every experience, to be educative, should result, then, in the growth of the learner in techniques, habits, attitudes, or outlook and should to that degree make him individually and socially more efficient.

7. Desirable growth in techniques, habits, attitudes, and outlook best takes place in situations in which the learner is free to make choices within limits set by the general welfare of the individual and the group, and to discover the desirability of those choices by means of the satisfactions and dissatisfactions attending the results.

8. The function of the teacher, therefore, is to:
   (a) Provide the conditions which make a variety of desirable experiences possible for each individual in the group, and to do so while guided by: (1) significant scientific findings of experts in various fields, (2) ultimate objectives which race experience and changing social conditions have shown to be desirable, (3) the learner's individual capacity—physical, intellectual, social and emotional, and (4) the general welfare of the group.
   (b) Effect such a social organization that each member of the group may make increasingly independent choices.
   (c) Guide those choices so that they will be within the capacity of the individual making them.
   (d) Make certain that choices result in satisfaction or dissatisfaction as the individual and group welfare shall determine.
   (e) Guide the process of the activity so that every possible phase of it shall contribute to the growth of the learner in techniques, habits, attitudes, or outlook.

c. Organization. The Institute occupies a five-story, remodeled building. The younger and older nursery-school groups occupy the third and fourth floors, respectively. Each group has two sleeping rooms, one play-room, bathroom for children, bathroom for adults, and locker space. The roof is divided and equipped to provide separate playground space for each group. The garden of a nearby children's home provides additional outdoor space for the older group.

Admission to the nursery school is through the younger group and is determined by desirability for research, as shown by age, sex, race, proximity of residence to nursery school, permanency of residence in New York, and general normality. It has been the policy to maintain an unselected group in which the parents represent unskilled and skilled labor, artisan and professional classes.

In the younger group twenty children are enrolled, ranging from eighteen months to about thirty-two months, and in the older group twenty-two children, ranging from thirty months to about forty-two months. Overlapping between the groups is occasioned by the varying social maturity and emotional stability of individual

children. Experimentation has made this division into more or less homogeneous groups seem advisable, since the interests and needs of different age-levels can be met better in separate groups. The number of children per teacher varies with the hours of the assistants. The nursery school is in session from eight-thirty to three, five days per week.

The teaching staff includes one full-time director for each group, with two trained assistants for the younger, and one trained and one student assistant for the older group. One assistant with each group is on duty from eighty-thirty to one-thirty, and the other from eleven to three-thirty.

The nursery school has access to the services of the Institute Staff, consisting of the director and assistant director, both of them psychologists; a physician; a graduate nurse; a nutritionist; a home visitor; a posture specialist; a business manager; a household manager; a recorder; and four research associates in charge of psychology, parental education, and general research.

The procedure of the nursery school is most flexible; the only set times are those determined by physiological needs such as sleeping and eating. The children arrive between eighty-thirty and nine-fifteen, when each child is inspected by the nurse before contact with any other child. They go outdoors as soon as possible, where they play until time for rest before lunch. Orange juice with cod-liver oil is served shortly after arrival. The children participate in caring for pets, plants, and flowers as occasion offers. Music and stories occur at any time in response to the children's interests. Rest periods vary according to the needs of individual children; some have a mid-morning rest in addition to the rest before lunch. Lunch is served at eleven-thirty and is followed by the afternoon nap, the length of which varies with different children. After a short play period, milk and crackers are served. The children are called for by their parents at three o'clock.

A close coöperation in promoting the children's welfare exists between the nursery-school teaching staff, the institute staff, and specialists from Teachers College.

The physician and nurse direct the health program, which includes thorough morning inspections daily, complete physical examinations semi-yearly, weighing and measuring, and close co-

operation with nutritionist, teachers, and parents in building up maximal positive health for each child.

The nutritional program, under the supervision of the Home Economics Department of Teachers College, is planned by the nutritionist to meet the needs of individual children and is carried out in coöperation with teachers and parents.

Posture examinations are given by the posture specialist, who coöperates with the nursery staff in selecting such equipment as promotes desirable postural development.

The research associates in charge of psychological tests examine the children twice yearly, reporting results on the usual record forms and consulting with the teachers concerning any significant outcomes. Realizing that a test under conditions of fatigue, fear, or other unusual conditions, results in harm rather than benefit to the child, psychologists consult with the teacher concerning the most desirable times for testing.

The nursery-school educational program is materially facilitated by the coöperation of the research associate directing major research. Research under her direction is carried on in the regular nursery-school situation, not in the laboratory. Results are reported to the nursery-school teachers from time to time.

The home visitor, as liaison agent between home and nursery school, is thoroughly familiar with both home and school conditions and confers with parents and teachers individually and in groups.

Educational supervision is provided through the Department of Kindergarten-First Grade Education of Teachers College. Regular group conferences are held with the nursery-school teachers, and individual conferences with all others concerned in promoting the welfare of the children. This close coöperation makes possible a unified educational program.

The Institute staff meetings held weekly for the clinical discussion of individual children offer invaluable help to the nursery-school teachers, since they lead to a better understanding of the children and make possible a more systematic coöperation.

The coöperation with parents necessary for the unity of the child's program is provided for by four means: (1) by the teacher's informal daily interviews, regularly scheduled conferences for discussion of the child's progress, occasional informal teas, and a full day spent by parents in the nursery school, (2) by the home visitor's

frequent visits to the home and her scheduled conferences from time to time, (3) by daily contacts with the nurse at morning inspection, and (4) by regularly scheduled conferences with director, nutritionist, and physician.

d. A Typical Learning Situation. Jane had been in an isolated camp for the summer with her family. Her only outside contacts were occasional visits from adult relatives. Her entrance to nursery school was her first venture away from her mother. The many children, the new playthings, and a teacher instead of her mother to attend to her needs, all meant adjustment to entirely new conditions. Here was a learning situation in which Jane passed through the following steps:

Arriving late, she was brought to the roof where the children were playing. She clung to her mother, who explained to the teacher that Jane had not been away from home, and it would be hard for her. The mother interested Jane in the sand-box, explained that she must go, kissed her, and left. Jane walked toward the elevator where her mother had disappeared.

She felt lost without her mother and, not knowing what else to do, cried. The teacher took her back to the sand-box, and this time Jane kicked it.

The teacher tried to take the place of the mother, tried to interest her in the dolls, blocks, or slide, but Jane wanted her mother.

The teacher tried again. She gained a little of Jane's confidence by doing the things that the mother would have done, wiped her eyes and nose, told her a story, etc. Then she brought her near groups of children who were playing at going marketing with dolls and carriages, taking turns riding in a wagon or using swings and slide. Jane turned away from each group and went toward the sand-box. The teacher began playing with the other children and Jane edged a bit nearer. The teacher made room for her without comment, and soon she began to play. For five minutes she was contented even after the teacher left. She had made a beginning toward adjustment. The morning passed happily; the teacher frequently joined Jane for a few minutes to establish a feeling of security. Jane did not care to eat much; so the amount was adjusted to her capacity. At rest period she went to sleep holding the teacher's sash. On the second day she was rather unhappy; so on the third day her mother called for her after dinner. The next day Jane "wanted to sleep with the other children."

At first Jane was as dependent upon the teacher as she had been upon her mother, crying when she left her; but gradually she became independent of the teacher and did things without crying for her. She was then left in charge of another teacher and later with varying groups of children, with or without a teacher. Frequently, the teacher moved

away from the group. Jane became more and more contented with the children without a teacher near. She had learned to feel secure in the nursery school. She had made the adjustment to a group outside of her home and so in a way had remade her life, had taken a step forward in skill, attitude, and outlook. Such a remaking of life is the aim of education—to give more content and more meaning and to help the learner to acquire more control in living.

e. Records. The prime function of the nursery-school teacher is to provide the physical conditions and the guidance which promote the maximal physical, intellectual, social, and emotional growth of each child and the general welfare of the group. She can provide for such growth only by being thoroughly cognizant of the various levels of the growth of each individual child and of his interrelation to the group. Careful records of these levels and stages of growth, both for the individual child and for the group, therefore seem essential.

These records serve as a guide to the nursery-school teacher in providing for every aspect of the child's growth, as a basis for discussing the child's progress with parents and specialists, and as data for research workers by providing the general setting for their studies and pointing out significant elements of behavior for further research.

The present record forms are the result of experiment still going on in an attempt to meet adequately the needs just mentioned. The following four records are now being kept by the teachers:

(1) Registration. This card is filled out by the teacher in an interview with the parent before the opening of school. Information is recorded concerning the child's habits of play, eating, sleeping, and elimination, a knowledge of which makes it possible for the teacher more intelligently to meet individual needs.

(2) Progress. These records are the result of notes taken by the teacher from day to day, showing each child's progress toward individual responsibility and social integration. These notes are recorded under four headings—bathroom, sleeping, eating, and play activities. Three other headings—general attitude, language, and musical responses—have been added for the purpose of collecting data for special research. Twice a year a summary is made from the data on these progress cards and discussed with parents individually.

(3) Parental conference. After any conference with the parent a record is made of the discussion and of suggestions given by both parents and teachers.

(4) Sleep and elimination. Records of sleep and elimination are kept both by teachers and parents; the latter each morning transfer the home record to the chart provided in the nursery school.

Detailed records are kept by all departments having contact with children and all records are filed with the child's complete social history in the record room.

f. Distinctive Feature. The most distinctive feature of the Institute Nursery School is its social organization, whereby a day's procedure is so flexible that the physical, intellectual, social, and emotional needs of the individual and the group may be met at any time, and spontaneous responses be so guided that they have increasing meaning and result in more desirable choices, more serviceable responses, improvement in techniques, and an increasingly broad outlook.

Indoors and out, the children will be found carrying on many different activities at the same time. Some will be using blocks, large or small; some playing in the doll corner; others climbing the junglegym, playing in the sand, or using hammers and nails. Some may be walking or crawling up and down the broad steps leading to a platform, and others may be carrying chairs or toys up and down the steps. A child may be looking at books alone, with a teacher, with one or two other children, or with a teacher and small group of children. A small group may be gathered around the piano or Victrola where the teacher is playing or singing, or the teacher may be singing without the instrument with the children gathered around her. A child may be making sing-song noises while swinging or rocking a doll. The teacher may move near him and several times sing a simple rhythmic song about swinging, or a simple lullaby which the child may that day or the next or the next week try to sing with the teacher or alone. In this way a random interest is raised to a higher level.

The children are not divided into groups, but as the year progresses two or three or more may spontaneously choose the same material and carry on their activities together. The bathroom is also a social place. As the children grow more efficient in taking care of themselves, many interesting conversations are carried on. The teacher often adds bits of information in response to natural questions. Often there is spontaneous singing during washing and dressing time.

Eating and sleeping are the only fixed group activities. Even here there is flexibility. At nap time some children may sleep as long as they like, while others must be wakened in order to go to sleep early at night.

This social organization seems to provide the effective conditions for growth.

7. The Nursery School of the Iowa State College of Agriculture and Mechanic Arts[11]

a. Purpose. The Nursery School of Iowa State College at Ames, Iowa, is maintained to serve the Child Care and Training Department of the Home Economics Division. The keynote of home economics at this college is homemaking. The residence program has been organized to give senior women an opportunity to be trained in, and become familiar with, the care and training of children. Obviously, this is one of the most important functions of home life.

b. Basic Educational Principles. The fundamental educational convictions which find interpretation in the activities of our school are expressed in the provision of an environment planned to give the child opportunity for optimal development.

Emphasis is placed upon formation of correct biological habits, such as eating, sleeping, and elimination. Through the development of optimal physical condition, coupled with automatism of these habits, thought and energy may be released for additional self-development.

The plan and equipment are so constructed that they may be controlled and manipulated by the child. This enables him to be resourceful and self-reliant in caring for himself in the activities which make up his life as a young child.

The opportunity for association with his peers under supervision develops an appreciation of social relationships. By sharing his play materials and equipment, maintaining his own rights, obeying authority, practicing self-control in awaiting his turn, and being helpful, the child meets many social situations.

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[11] This report is a revision of the material contributed by Lulu R. Lancaster, Associate Professor of Household Administration, Iowa State College of Agriculture and Mechanic Arts.

For the best possible development of his abilities, the child needs freedom in the use of his individual capacities. He needs material which lends itself to varied forms of creative expression. Clay, paints, blocks, paper, and crayons may be used for this purpose, as may the language and music activities.

c. Organization. The personnel of the staff consists of the director, a consulting psychologist, and two nursery-school teachers. Coöperating with this staff are also a doctor in nutrition, a doctor in medicine, and the head of the Physical Educational Department.

The nursery school is housed in a three-story building at the edge of the campus. The entire building is given over to the nursery school and offices of those who are doing full-time duty on the staff. On the lower floor are the kitchen, one of the toilet rooms, the cloak room and three offices. On the second floor are the so-called playrooms, while the third floor is used for sleeping or for play in rainy weather.

Outdoors a large amount of play space has been fenced in. The equipment here consists of a junglegym, a large concession tent, a swing, bars, a sand-box, a garden, houses for animals, many trees, some of which the children are allowed to climb, plenty of grass, and plenty of shade. The indoor equipment is adequate in every way for nursery-school work.

The Program of Activities

8:45– 9:00	Children arrive. Remove wraps.
9:00– 9:10	Domestic activities—dust, fold napkin, take care of animals and any pets.
9:10– 9:40	Quiet free play. Blocks, crayons, paper cutting, writing, marking, drawing, peg boards, wood beads, painting.
9:40–10:00	News, rhythm, dramatization, finger plays.
10:00–10:15	Toilet and washing of hands.
10:15–10:30	Mid-morning lunch of fruit and water.
10:30–10:40	Rest period.
10:40–11:40	Outdoor play.
11:40–12:00	Setting of tables and story period.
12:00–12:45	Lunch.
12:45– 1:00	Toilet.
1:00– 2:45	Sleep.
2:45– 3:00	Put on shoes. Toilet. Home.

The program has been very flexible, especially so at times, because of coöperation with the Public Speaking Department and the Foods and

Nutrition Department. The class in story-telling scheduled each of its members to tell a story to the children and it was not always possible to carry out activities in the exact order outlined on the program. The gift of some rats by the graduate students in nutrition and the work of the children in feeding and weighing them made changes necessary at other times.

The children have been outdoors for at least part of practically every morning. In early spring when the playground was too muddy, they stayed on the wide concrete steps; the piano was moved near the door, so that we had a very satisfactory place for rhythm exercises, for story-telling, and for the mid-morning lunch. During warm weather the children were outdoors all the morning except for this lunch and rest period.

Several educational trips were also taken when the playground could not be used. For example, the Animal Husbandry Department allowed us to take the children through the barns to see the young pigs, lambs, calves, and colts. A trip to the campanile and explanation of the chimes and the way they were played also proved instructive. Again, a trip to the post office to mail a letter and one to the dairy were new to many of the children.

Later in the spring we had three rabbits for the children to help feed. One of the older boys made a bird house, which the others helped to put in a tree. Vegetable and flower gardens were planted by the children. They watched the seeds grow and watered them frequently. When the radishes and onions were large enough, they were shown how to pull them. One or two of the older ones helped with the hoeing of the weeds.

In warm weather, story-telling outdoors proved very popular. The children were divided into small groups of two and three who gathered in shady spots under the trees. The work at the carpentry bench was continued outdoors, as well as painting at easels.

The psychologist, the doctor of medicine, and the doctor of nutrition all coöperate with the nursery-school staff and parents. The psychologist holds weekly conferences with the staff. The doctor of nutrition attends these conferences when she is needed. All children have a complete physical examination upon entrance and are examined every morning by a nurse from the hospital to see that they are not bringing to the nursery school any kind of contagion. For any illness that develops during the day, our campus physician is subject to call.

The children of the nursery school come from a selected group of parents, mainly those connected with the college or with business. The long waiting list enables us to require coöperation from the parents.

Both parents are expected to attend at least two meetings each quarter. One of these is a meeting of all parents for discussion of general topics. At the other, the two parents have a conference with the director, the psychologist, the doctor of nutrition, and the nursery-school teachers about the special problems of the child.

No children are taken into the nursery school who do not have a clean bill of health or who seem to be mentally retarded. Children are selected who represent, as nearly as possible, normal healthy childhood.

During the year we have an average enrollment of about thirty children. During the second session of summer school the number is reduced about one half, because the summer-session student attendance is somewhat lower than the regular yearly student attendance. The number of children to a teacher is approximately twelve to fifteen.

The nursery school opens at 8:45 and closes at 3:30.

We wish to keep the children over a period of two or three years if possible. We prefer to admit only the younger children and let them pass on to the older group, but we are not always able to do this because of the demands made by parents who are in college for a short time and who feel that they should have the privilege of having their children in the nursery school while they are studying or teaching here. We try to keep about the same number of boys and of girls in each group.

d. A Typical Learning Situation. The dinner hour affords a typical learning situation in our school. One of the playrooms is arranged for the serving of the noon meal. At noon the children find their places at the tables. A student in child care sits at each table with three children, one of whom is chosen to act as waiter. Grace is sung, after which the waiters serve the dinner. At the close of the meal each child removes his dishes.

Such a situation offers opportunity for the child to learn such correct eating habits as (1) to eat a variety of food, (2) to eat all of the dinner served to him, (3) to observe proper table etiquette, the correct handling of silver, etc. In addition, the dinner hour gives the child such social experiences as engaging in conversation at the table or the serving of others.

e. Records. We believe that records are of the greatest importance. The nursery school fails fundamentally if it does not

use its opportunity for obtaining factual material about children. No other agency, so far as we know, furnishes the same opportunity to study children, except possibly the few home management houses in colleges of home economics and orphanages where scientists are employed to make the studies. In so far as exact records are kept in nursery schools and similar places, child study will rise from the realm of mere opinion into the field of science.

Here at Iowa State College we have far to go before approximating our ideal in the keeping of records. We are still much too limited in number of staff members for this particular work.

In physical growth, records are kept of height and weight, for which measurements are taken every two weeks. Records of causes for absence from the nursery school are also kept which should throw some light on physical handicaps as they interfere with growth. We have records also with respect to disease handicaps, particularly contagious diseases before the child enters the nursery school. Our records are kept on one half of the children for one half the time, for food during the noonday lunch and for sleep during the afternoon nap.

In mental growth the most exact records that we have are in mental tests. The psychologist makes tests on each child, using the Stanford Revision Binet, the Blanton Speech Test, and the Kuhlmann Intelligence Test. Each child is tested as soon after he enters the nursery school as he becomes sufficiently adapted to take the test. Thereafter, he is tested approximately every six months.

In addition to the tests, the nursery-school teachers, director, and psychologist keep full account of problems of any kind which arise. Teachers have notebooks in their pockets always; anything which seems significant is recorded immediately. This material is turned over to the psychologist for compilation and interpretation.

Students in special problems keep records dealing with their special problem. At present one of the graduate students is putting the children through certain tests which she has improvised to determine their reaction to music under semi-natural and controlled conditions. Another is measuring the reaction of children to visual rhythms as determined by combinations of color, size, form, and special arrangement.

f. Distinctive Feature. We are getting at the problem of early childhood education in both a direct and an indirect fashion. We

have nursery-school teachers trained in the best technique. All of our thirty-two children are under their supervision for a minimum of three hours during the day and one half of them for six and one-half hours.

We believe, however, that our most distinctive feature is in early childhood education through the indirect method. There are two phases of this work.

Our nursery school was established to serve as an observational laboratory for the students of home economics, of which we graduate about 150 each year. These young women are required to take, during the senior year, a four-quarter credit course in which the nursery school is used as the laboratory. Each student spends a minimum of twenty hours observing and working with children in the nursery school. Her activities range from helping in the preparation of the meal for the children's noonday lunch to the observation of methods in solving the complex problems of behavior as they arise in the course of the day. The young women who major in Child Care not only have much additional opportunity for observation but also much more firsthand experience in working with children.

Our primary aim is to teach our students the best-known methods of meeting the problems of child care as they arise in the home situation. In our teaching we visualize their problems as future mothers in American homes. Some of the young women who major in the course are looking forward to nursery-school teaching. These, of course, have specialized in work bearing on that particular interest.

8. Mary Crane Nursery School[12]

a. Purpose. Mary Crane Nursery School had its origin in an affiliation between the National Kindergarten and Elementary College of Evanston, Illinois, and Hull House of Chicago, Illinois. The college was to be in charge of the educational program of the school and Hull House was to arrange for contacts with specialists—pediatrician, psychologists, *et al.*—necessary for the conducting of an adequate nursery school. The school has been in operation

[12] This report, submitted by Nina Kenagy, of the Kindergarten and Elementary College, has been revised to bring the material into topical organization.

under the supervision of the college since October, 1925. The purpose of its organization is four-fold: a demonstration of nursery-school education for little children; teacher training for teachers of nursery school and kindergarten; parental education for the parents of the children enrolled in the school; and a demonstration of a nursery school as a social agency in a settlement.

b. Basic Educational Principles. In its procedures the school endeavors to meet the changing views of education which have been necessitated by the importance which scientific study is placing upon the preschool age. Consequently, it holds the conviction that both the physical and mental health of an individual are best safeguarded for life by building into the nervous system during these early plastic years right habits of living—physically, mentally, socially, and emotionally. Five essentials are necessary for the operation of a program based upon this conviction: the help of specialists in handling the health program and behavior problems; a physical environment in which the child can function and which he can learn to control; social contemporaries with whom to play; a definite educational program and orderly routine with specially trained teachers in charge; and a system of parental education to insure a carrying over from the school into the home.

These essentials are definitely provided for in the affiliations Miss Jane Addams, head resident at Hull House, made with other existing agencies interested in child welfare which are housed with the school in the Mary Crane Nursery Building, in the staff personnel of the nursery school, and in the organization of the activities of the school.

c. Organization. In operation, the nursery school is affiliated with a number of specialized agencies. The Infant Welfare Society of Chicago has in charge the health program for the children enrolled in the school. One of their pediatricians makes all physical examinations. His recommendations for remedial measures are carried out by one of their nurses or by the nursery school when they can be incorporated in the daily routine. Their dietician has charge of the nutritional program. She weighs and measures the children monthly and makes out the menus for the noonday meal. This society also provides an ultra-violet ray machine. Treatments are given as a part of the nutritional program, as well as for rickets and all cases of malnutrition.

The Child Welfare Department of the Chicago Board of Health provides a dental clinic where the children's teeth are periodically cared for.

The Elizabeth McCormick Memorial Fund conducts a weekly nutritional class for the older children in the families of the children enrolled in the nursery school. The social workers from the United Charities of Chicago secure the social histories of the families represented on the school register and do social service work in these homes. The Institute for Juvenile Research, through a behavior clinic known as the Preschool Branch of the Institute of Juvenile Research, gives the mental measurements, and their psychiatrist gives help on behavior problems. This organization also carries on a research program. All of the children in the nursery school are registered in this behavior clinic and are once a year presented for a case analysis at a staff conference of all the affiliated agencies. At this conference all the information each agency has upon the case is first reported; discussion then follows, and recommendations are made by the clinic staff. These recommendations are carried out by the agency in whose respective field of work they naturally fall. A follow-up is later made by the clinic for results of these measures. The following information is given at staff conferences by the agencies indicated:

1. Social History—Social worker, United Charities.
2. Developmental History—Nurse, Infant Welfare Society.
3. Nutritional History—Dietician, Infant Welfare Society.
4. Physical Examination—Pediatrician, Infant Welfare Society.
5. Nutritional program in the home—Nutritional worker, Elizabeth McCormick Memorial Fund.
6. Psychiatric Findings—Psychiatrist, Behavior Clinic Preschool Branch Institute of Juvenile Research.
7. Psychological Findings—Psychologist, Behavior Clinic Preschool Branch Institute of Juvenile Research.
8. Nursery School Report—Nursery School Director.

These case records are filed in the behavior clinic and a summary report, with a recommendation, is made to the coöperating agencies.

The staff of the nursery school, which is selected and supervised by the National Kindergarten and Elementary College, is composed of specially-trained and experienced workers, a director, and two

teachers. A group of ten student teachers in training at the college assists in the various activities.

There are two groups of children, ages two and three years, and ages four and five years, respectively. Each group is limited to twenty-five in enrollment. While the basis for grouping is the chronological age, no hard and fast line is drawn. The child is placed in the group which his mental and social development indicates. Application for admission is made through the Infant Welfare Society and United Charities for children they find in their field work. These applications are presented to the staff conference for approval, then placed on the waiting list until a suitable time for admission by the director. Children are admitted for various reasons: behavior problems, nutritional problems, economic situations in the home, and sometimes because of the need of parental education.

The school tries to keep a good balance between the difficult behavior problems and the more normal children. Because of the locality in which the school is situated, it is necessary to consider the economic conditions in the homes in relation to the length of the school day. For the children of the working mother the doors are open from 7:00 A.M. until 5:20 P.M. For the other children the regular school-day hours are observed. The school operates on an all-day basis with a midday lunch, special feedings of fruit juice and cod-liver oil, and a nap in the afternoon.

Each group occupies two rooms separated from each other by the nursery-school office. These rooms are equipped with indoor play apparatus and supplied with educational materials to meet the respective period of development of the children in each group. There is a large open-air porch which is used for both play and sleeping purposes, and two bathrooms equipped with bath tubs and so arranged that each child has his individual cake of soap, wash cloth, towel, comb, and tooth brush. Each group has separate locker rooms for wraps and changes of clothing. A surfaced playground adjoins the building and is equipped with a junglegym, seesaws, slide, wagons, tricycles, climbing apparatus, boards, blocks, boxes, kiddy kars and coasters. There are also tables for educational materials, blackboards and easels, so that the outdoor hours of the children may be prolonged as much as possible when the weather permits.

The all-day program of the nursery school affords opportunity for varied educational activities:

First, it permits activities which develop habits of personal hygiene and right living, such as washing face and hands, brushing teeth, bathing, dressing and undressing, proper and regular feeding, satisfactory and regular eliminations, relaxation, sleep, and wholesome recreation. Incident to the building up of such habits is the development of the appreciation of their values and the consequent right attitude toward them and independence in the performance of them. The adjustment of the child to his social contemporaries and the adults in his environment, also, gives occasion for the development of social habits and emotional controls.

Second, it permits curriculum activities for pleasure as well as both physical and mental development, *e.g.*, excursions, conversation periods, handwork, painting and drawing, stories, music in song and rhythm. These activities arise out of, and are incident to, the natural play situations and interest of childhood; they are not parts of a definitely organized program. This procedure is to provide a creative environment which will not only conserve the personality of each child but also allow it freedom for creative expression. The following flexible schedule is suggestive of the day's activities.

SCHEDULE OF DAILY ACTIVITIES

7:00–9:00

Arrival of children.
Health inspection downstairs.
Weighing and measuring of children on their birth dates.
Routine of care for wraps, eliminations, clean-up in bathroom.
Free play in nursery room until arrival of teachers who assist in conducting the general activities.

9:00–10:30

Activities which occur simultaneously with the general educational activities.
Educational activities indoors or outdoors as weather permits. The older group usually spend half hour indoors before going outside.
Bathing program in progress.
Ultra-violet ray treatment.
Psychological measurements.
Physical examinations.

Corrective posture exercises.
Extra feedings for undernourished children.

10:30–11:15

Outdoor posture exercises.
Short conversation period and story hour after coming upstairs.
Bath routine in preparation for noon meal.
Washing hands and face, combing hair.
Relaxation on individual rugs 20 minutes.

11:15–12:30

Noon meal, children serving each other.
Preparation in bathroom for afternoon nap.
Undressing for nap. Older children have freedom of their rooms while waiting for younger children to vacate bathroom.

12:30–3:00

Afternoon nap.
Dressing and folding up of blankets by older group.
Afternoon feeding of fruit juice and cod-liver oil.
Continuance of educational program, either indoors or outdoors, until arrival of parents.

3:00–5:00

Children of working mothers outdoors if weather permits until arrival of mother.

The teaching technique of the school is based on two considerations. First, if learning is to take place through practice with satisfying accompaniments, an environment must be provided in which a child can adequately function so that the necessary readiness to learn is secured. Learning is then measured by the degree with which the child controls that environment. Second, each situation within the environment is a learning situation and one to which the child makes his adjustment through the learning process. When the situation is learned or the child functions adequately in it, a habit or hierarchy of habits is built up and is automatically performed. Arrange the environment to the child's physical and mental level and it of itself is a satisfying accompaniment to the learning process. The rounding out of each learning situation with adequate equipment, as the exact height of a chair in learning the sitting posture, or with sufficient supplies, as toothpaste in the tooth-brushing situation, insures necessary satisfaction. A definite place or definitely designed receptacle for specific tools or toys also aids the learning process. Adult approval in language

or facial expression aids in shifting undesirable responses of learning to desirable ones.

d. Typical Learning Situation. A child entered the nursery school on her second birthday, December first. One Saturday in March the mother with the child had occasion to come into the school. The child immediately ran to her favorite haunts of play and the following observation was made of her. She went to a low cupboard, took a pair of scissors from the scissors holder, a piece of enlarged crayon from the crayon holder, and a piece of paper from a tray and placed them on one of the low tables. She then seated herself and began making marks on the paper with crayons for several minutes. The crayon was then laid on the table and she went to get the waste-paper basket, placing it by her chair. She again seated herself, picked up the scissors, and chewed rather than cut off small bits of paper which she carefully put one by one in the basket. When she grew tired of this activity, she put both scissors and crayon back in their respective holders, and the piece of paper which was left, back in the tray from which she had taken it, and the waste-paper basket back where it belonged. Analysis is hardly necessary to point out that here was a situation in which a child could adequately function and that readiness, practice, and satisfaction insured the learning which had so evidently taken place.

e. Records. The record keeping in the school has been used for two purposes: first, to secure as accurate a picture as possible of the child and his progress, and second, as an aid in teacher-training. Two sets of records are kept, one of the child's habit-formations and one of his reactions to educative materials and to other human beings. The habits recorded are mainly those which have to do with health and personal hygiene for which a daily routine has been established. The habits have been listed in each situation in their sequential order, so that the learning is minimized for the child. A checking system has also been devised to minimize the time for taking the record yet give adequate information. The code used for the educational records and social reactions aims at a technique to aid the student-teacher in the analytical study of children's behavior and of how to change undesirable behavior. It also aims at a technique for intelligent guidance of the educational program. Responses to a questionnaire answered when the student

leaves her practice period indicate that the record-keeping, together with conferences, is an aid in the acquisition of teaching techniques and in the objective study of children's reactions.

f. Parental Education. The parents of the children attending the nursery school are characteristic of a settlement district, many of them still retaining old-world standards of living. Three outstanding needs of the children at the opening of the school prepared the way for a program of parental education: proper food, clothing, and cleanliness. Language difficulties complicated the problem. Consequently, activities began in the organization of a sewing and cooking class. The sewing class met in one of the nursery-school rooms where the mothers came in contact with its environment and with ideals of cleanliness, regularity, and orderliness. Garments were made for the children which eliminated elastic bands at the waist and knees. Instruction was given as to the proper amount of clothing to wear. This was done because objections were made at first to the bathing program in the nursery school and to the requests for the removal of the many layers of knitted sweaters found under the outside garments of the children.

The cooking class was conducted in the cooking-school room at Hull House by the dietitian from the Infant Welfare Society. It included lessons in food values, wholesome ways of cooking, the selection and purchasing of proper foods, and attractive ways of serving them.

These class hours were often followed by a social hour around the piano where the songs the children loved were taught to the mothers so that they might enjoy them together at home. When a sufficient English vocabulary had been acquired by the mother, simple talks on child care and guidance were given. These weekly evenings at the nursery school were often ended with folk games.

In addition to this work done by the nursery school, each mother is given instruction and expert advice relative to the particular problems her child presents. This is done by the specialists in the affiliated organizations, the pediatrician, the psychologist, the psychiatrist, and the dietitian. Social workers give help in her home-making problems.

g. Distinctive Feature. The affiliation of agencies already in existence in the different fields of child welfare and their pooling of information at the staff conferences in the diagnosis of the child-

ren's behavior is the most outstanding feature of the Mary Crane Nursery School. The utilization of this plan, with all its social and educational implications, for the training of nursery-school teachers is also of importance.

9. The Merrill-Palmer Nursery School[13]

a. Purpose. The Merrill-Palmer School, of which the nursery school is but a part, was established under the will of Mrs. Lizzie Merrill Palmer. The clause providing for the school reads somewhat as follows:

> I hold profoundly the conviction that the welfare of any community is divinely, and hence inseparably, dependent upon the quality of its motherhood and the spirit and character of its home, and moved by this conviction, I hereby bequeath the remainder of my Estate for the founding of a school to be known as the Merrill-Palmer Motherhood and Home Training School, at which young women shall be educated and trained with special reference to fitting them for the discharge of the functions and service of wifehood and motherhood.

Educators, especially in the field of home economics, had been aware for some time of the need for giving their students something more adequate than a theoretical knowledge of the child. More knowledge of child life was needed, as well as some device whereby students might have laboratory experience with children in a laboratory which would be of unquestioned advantage to the child.

It was this same problem of devising some satisfactory method of providing practical experience with children which those charged with the responsibility of carrying out the provisions of Mrs. Palmer's will had to face. In the nursery school, already accepted in England as part of the educational system, they found the suggestion for its solution.

Plans were made to offer college students courses in the physical and mental growth and social life of the child, with experience and observation in the nursery school supplementing the classroom work. This was put into effect in January, 1922. Through a coöperative arrangement, the students were to receive credit toward their degree at their own colleges for the work done at the Merrill-Palmer School.

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[13] This report was written by Winifred Rand, of the staff of the Merrill-Palmer School of Homemaking.

The purpose of the undergraduate course, which has been planned on a term or semester basis, is to give the students general information about childhood.

Graduate students who come for a year's study usually specialize in some physical or psychological aspect of the problem of child care. Some of them definitely plan to enter the field of nursery-school teaching; others, the field of parental education, social work, research in child development, or the teaching of child care. But whatever their plans, it is the conviction of those guiding the policies of the school that practical experience is an essential part of their course. All students, therefore, have definite assignments for observation in the nursery school and for actual participation in its program. Every activity of the day, no matter how humble it may seem, is considered a learning process. Each situation is one toward which the child may learn to have the right attitude, or, if unwisely treated, the wrong one. To become acquainted with all these learning opportunities, the students have responsibility, under supervision, in various child activities. In the cloakroom, toilet room, playroom, and workroom, on the playground, at dinner, during the nap period, and in the laboratory where the children go for their monthly weighing and measuring, students are at work.

b. Basic Educational Principles. The nursery-school program is a program of living; the lessons learned are not in books, but are lessons learned by doing and by living healthfully and in accord with one's fellow-beings. The teacher in the nursery school is, one might say, background. But when the situation offers the opportunity for a lesson, perhaps in sharing with another, perhaps in eating unwanted spinach, hers is the responsibility to present that lesson. It must be done in such a way that the child or the group may grasp the idea and desire to act upon it.

An environment rich in the possibilities for varied experiences on the child's level socially, emotionally, mentally, and physically has behind it in its planning more in the way of fundamental principles than one would at first believe. Here, for a part of each day, children live together in groups and as independent individuals, healthfully and happily active under the guiding hand of a skilled teacher. That children learn by doing, that pleasure is an essential help in learning, that the early years are important years, and

that freedom for expression of individual interests is a necessary part of well-rounded living, these are all guiding principles in planning the program of the nursery school. Furthermore, it is believed that the group made up of children from approximately one period in childhood is one of the most helpful influences in learning the right social lessons.

The nursery-school day should be a day of simple, healthful living. The proper attention should be given to a child's physical needs, and his ability to coöperate with interest and intelligence in caring for himself should be recognized. Thus he forms good physical habits. The daily inspection by a nurse each morning as a safeguard against the spread of infection; the glass of water, the tomato juice and cod-liver oil; the toilet; the dinner; the nap; the round of daily duties; the monthly weighing, measuring, and occasional visit to the dentist or other specialist; each is accepted, not as a meaningless task imposed upon the child from the outside by some adult in power, but as a routine in which he takes an active, responsible, and leading part.

The day should be one of happy, joyous activity indoors and outdoors, with toys and equipment that call for doing and creating. The school should offer things that are big and heavy, that will call every muscle into play, things that allow for climbing and balancing, in order that the child may gain skill in the control of his body, and tiny things that call for skill in handling, that the child may learn to control his small muscles as well as his large muscles. It should also offer things that may be classed as raw materials that will call a child's imagination into play; things that will train his senses of sight and touch and judgment of size and shape; things that will stimulate him to play with a group; things that he may play with by himself; and things which may help him learn to concentrate. All these should be found on playground or in playroom. Carts there are, and bicycles, but not enough for everyone—not only because all will not want them, but also because the lessons in sharing and taking turns are lessons which may be, and are, learned through play.

The day should be one which allows for some individual choice of activity and also for group thought and action. It should be one in which there is richness added unto life through the joy of music and rhythmical expression, through story or verse, and through

contact with beauty. This should be in simple form as expressed by picture, color, and form, and found in sun and sky and birds and flowers.

The day should be one providing the child with responsibility for his person, his things, and his deeds, and with opportunities to learn his responsibility to his fellow-men.

The nursery-school day is a busy, but not a hurried day; serenity must be a keynote. Every bit of equipment, every toy, and every activity is planned to fulfill some one of the day's requirements. In a cloakroom where hooks are low and lockers are marked with individual picture tags, children learn to take care of their own things. They learn also to master the intricacies of buttoning and unbuttoning, of putting on and taking off. In a toilet room where the equipment fits their size the lessons in self-help and responsibility go on. In a playroom where the shelves are low the individual child may make his own choice of material and assume his own responsibility for putting it away. In the daily tasks, such as setting tables, carrying trays, putting away mats, or doing other household tasks, the children may experience the satisfaction found in coöperation and helpfulness, as well as acquire skill in control of body.

In group activity there are countless lessons to be learned through sharing, through watching each other, through doing things together, through doing things alone but before the group, and through rhythmical, dramatic play. Through wisely-guided observation, through wise answers to proffered questions, and through using the children's experiences or the children's interests, their knowledge may be increased and their experience broadened.

The weighing and measuring laboratory is an attractive room with equipment which makes it a children's room, very different from the one called to mind by the term "laboratory." Here children learn how much they grow and how it is accomplished; and many an attitude of rebellion toward carrots or a nap, or whatever it may be, is changed by visits to that room.

On the playground, at dinner, in the laboratories at the Merrill-Palmer School, the living goes on and the learning goes on—learning in which the emphasis is on the lessons in social relationships and on the development of desirable attitudes toward self and one's physical life, as well as toward others. The learning how to *do*

is more easily observed than the learning how to *be,* but every day gives examples of both types.

c. Organization. Each day the children are in the nursery school from about nine in the morning till three-thirty in the afternoon. They represent many types of family background within the wide range of the so-called 'middle class.' Physical examinations, mental tests, family and developmental histories are taken before admission. These must assure the school that the child is normal physically and mentally and that the family will give the cordial coöperation which is required.

The school desires to study the growth and development of normal children, and it is desirable to have the children over as long a period as possible for that purpose. Therefore, the general policy is to admit a child at as early an age as is practical. A child may be admitted to the nursery school at eighteen months; he may remain in the school until the end of the semester following his fifth birthday. Rarely is one admitted after his third birthday. On occasions, when the ranks between three and four years have been depleted by the premature withdrawal of a child, one of the same age and sex may be selected to fill that place. This is done because the school desires to have its fifty-five children represent all ages between eighteen months and five years and be fairly evenly divided between the sexes.

The nursery-school children are divided into two groups. In the one group of thirty children, the whole range of ages is represented; in the other of twenty-five children, the oldest is three years and seven months of age. The school has adopted this policy because it wishes to have one group which is more or less typical of what must inevitably be found in most nursery schools of small size; that is, children of various ages from eighteen months to five years in one unit. The school believes, on the other hand, that there are advantages in having children in one group who are more nearly of an age; for the difference in development is great between the child of eighteen months and the child of five years. When all ages are represented, there is the advantage to the older children of having experiences in the consideration and care of smaller children. There are some younger children who successfully withstand what is sometimes undue 'mothering,' whether done by boy or girl, and who seem to profit by contacts with older children. On

the other hand, there are some children for whom this is not the wisest experience, who learn more easily and adjust more readily in the younger group. Choice is made of one group or the other on the basis of the child's physical and social needs.

Each group is housed in quarters not built for a nursery school, but adapted to meet its needs. The older group has the large rooms which were once private art galleries, and which are on two floors. The younger group has rooms on the first floor of what was formerly a private residence, and the added advantage of a shelter outdoors where they sleep daily, even throughout the winter months.

For each group there are two teachers who, though they have the assistance of students, also have the responsibility of training them in the actual practice of dealing with the children. The school found its first nursery-school teachers in England, since at that time there were no women trained for nursery-school work in this country, and it has continued to look to England for its head teachers. The English-trained woman has an all-round point of view which gives her an excellent sense of balance between the physical, mental, and social values in child care. This fits her particularly well to work with a staff of specialists—for the staff of the school includes many more than the nursery-school teachers.

The physical care of the children is under the supervision of a physician, a nutritionist, and their assistants, and other specialists in this field who are called in from time to time as the need arises. The mental growth and development of the children is the concern of psychologists who do the mental testing and advise in regard to the treatment from the point of view of behavior and mental capacity. Knowledge of the children's home conditions is gained from a home visitor. Through her contacts with the parents better coöperation is sought, and a program in parental education is developed with the assistance of the whole staff. Research in the various fields of the nursery-school child's growth is carried on by each department and also through coöperative effort.

With a departmentalized staff of specialists there arises the danger of getting the child pigeonholed in various sections with no one person or group to observe him as a whole. To obviate this danger, there is a nursery-school committee, representing the various departments of the school, which meets regularly for mutual discussion and decision of nursery-school matters.

d. Typical Learning Situation. A small boy, two years and five months old, desires to help put away the gay-colored linens that serve as table-cloths. He has before this helped to roll and put away the mats, and he practices the same technique with the rather stiff linen, but the rolled linen will not stay rolled when he puts it on the shelf. After several attempts he accidentally succeeds in making it stay because it has caught in a groove at the side of the cupboard. It is at this point that the watchful teacher steps in to give some help in the learning. She calls Jimmy's attention to herself as she folds another cloth into the creases which show plainly across its length and breadth. Jimmy watches with eager interest and then he, too, folds a table-cloth and takes it to the cupboard. Here, again, there is difficulty; for the folded linen will not stay balanced on the stiff roll of linen still lying on the shelf, but slides out on to the floor. This puzzles Jimmy, but he does not turn to the teacher for help. Self-reliance has been developing within him during his three months in the nursery school; so he struggles interestedly with his own problem. He turns the square upside down; he turns it round and round; he presses it down hard with a pat of his hand, but always the folded linen rolls to the floor. He peers into the cupboard to discover if there is something wrong there. He looks all around its sides and at the shelf. As he looks, one sees a light flash across his face. He puts the folded square which is in his hand back upon a table; he takes the rolled linen out of the cupboard, unrolls it, and folds it, places it back on the shelf and on top of it places the next square. His method succeeds! He has solved his problem. All the table-cloths are put away. Jimmy has learned more than one lesson through that experience, while habits of self-reliance, persistence, investigation, and helpfulness have been strengthened.

e. Records. Daily records are kept at school regarding: the child's attendance; causes for absence; elimination at school; the amount eaten; the time taken for eating dinner, which is planned to meet half his daily food requirement; the nap period; and such other events and behavior as are considered important for notation. A daily report is sent home with each child to give the parents the information in regard to dinner, nap, toilet, and important behavior situations. Daily reports from the home are asked for in order that the school may have the information as to home

meals, the night's sleep, elimination, and the water intake.

Once a week the school menus for the ensuing week are sent home in order that the home menus may be more intelligently planned through knowledge of what the child has to eat in school.

Twice a year the child is given a complete physical examination, and once a month he is weighed and measured. A report is sent to the parents, with any comment which might be helpful.

Twice a year, at six-month intervals, the child is given a mental test. The record includes not only the rating score but also comments on the child's personality traits as shown by his behavior in the test situation.

Once a year a summary of the child's growth and development—physical, mental, and social—is made from the combined observations of the staff members who are familiar with him. A copy of this summary is sent to the parents, with recommendations as to methods of dealing with him.

These records have various objects in view: they bring together material which may add to our knowledge of child life, which may be used for teaching purposes, which may help us in dealing more adequately with the individual child, and which will be helpful to the parents in their dealing with him.

f. Distinctive Feature. As records have more than a single purpose, so, too, has the Merrill-Palmer Nursery School more than a single purpose. It seeks to provide an environment where the little child may be freed for satisfactory growth; it seeks knowledge of the little child in order to impart knowledge; it seeks to teach through giving practical experience to students. It furthermore seeks to share its experiences with the parents of the nursery-school children in order to win their intelligent coöperation in the nursery-school program and in order to give them what they so much desire—added knowledge and wisdom which will make for a better environment for their children and the children to come.

10. The Nursery Training School of Boston[14]

a. Purpose. The Nursery Training School of Boston was organized January, 1922, as the Ruggles Street Nursery School. At that time the Managing Board declared their purpose in organiza-

[14] This report, except for slight revisions, was written by Gertrude E. Athearn, Assistant Director of the Nursery Training School of Boston.

tion to be three-fold: to give the best possible opportunity for development to children between the ages of two and four, to train parents through observation and conference with experienced teachers, and to train young women in the science and art of nursery-school education.

b. Basic Educational Principles. Believing that the child becomes predisposed to definite types of conduct and of thought during the first years of his life, this school aims to provide for him a social environment of his peers in which he may learn to adjust himself to the group, without losing his own individuality.

Believing that the preschool child learns more through feeling than through words, this school has developed an educational policy which surrounds the child with an environment controlled by an artistic teacher.

c. Organization. The staff of the nursery school is as follows: an educational advisor, a psychiatric advisor, an organizing director, five teachers, (one supervisor, two critic teachers, two part-time teachers in training), a nutrition worker, and a secretary.

The school is housed in a remodeled dwelling house, providing space, light, and sunshine. The rooms are, listed in accordance with our use of them: three large playrooms, three washrooms, five children's toilets, two outdoor floored play porches, an indoor playroom for sliding, a nurse's and dietitian's room, a carpentry room in the basement, an isolated room, an office, and a students' room. These rooms are equipped to meet the needs for which they are planned.

The day's program which follows, while well-defined, is sufficiently elastic to allow for any necessary changes.

8:30	School opens.
8:30 to 9:30	Nurse's examination, toilet, gargle with salt water, free play outdoors.
9:30 to 10:00	Music period, tone matching, rhythms, posture training.
10:00 to 10:15	Rest.
10:15 to 10:25	Toilet, wash hands for lunch.
10:25 to 10:45	Mid-morning lunch.
10:45 to 11:10	"Occupational," or constructive handwork, period.
11:10 to 11:45	Free play outdoors.
11:45 to 12:00	Toilet, preparation for dinner.
12:00 to 1:00	Dinner, toilet, brush teeth, remove shoes.

1:00 to 3:00	Afternoon nap.
3:00 to 4:00	Put on shoes, drink milk, orange or tomato juice. Free play until parents call from 3:15 to 4:00.
4:00	School closes.

We have been experimenting with a summer program, which keeps the children indoors during the hottest part of the day, but no program has been definitely accepted. The following, however, seems to be the most satisfactory, although it will doubtless undergo a great many changes.

8:30	School opens.
8:30 to 9:30	Nurse's examination, toilet, gargle, free play outdoors.
9:30 to 10:05	Free play outdoors.
10:05 to 10:10	Toilet, preparation for lunch, morning "circle," singing of hymn and good-morning song.
10:10 to 10:25	Rest.
10:25 to 10:45	Mid-morning lunch—crackers and milk.
10:45 to 11:10	Music.
11:10 to 11:45	"Occupational" period, free play.
11:45 to 12:00	Toilet, preparation for dinner.
12:00 to 1:00	Dinner, toilet, brush teeth, remove shoes.
1:00 to 3:00	Afternoon nap.
3:00 to 4:00	Put on shoes, drink milk, free play until parents call from 3:15 to 4:00.
4:00	School closes.

The nursery school coöperates extensively with the social, medical, and educational institutions of the city. Chief among them are the habit clinics, church, home and school visitors, Family Welfare Association, Forsyth Dental Clinic, and the Children's Hospital.

Our school is situated in one of the poor sections of Boston, on the border of the Irish and Negro districts. Parents are skilled and unskilled workers, making twenty-five to thirty-five dollars a week. Most of the fathers can provide their large families with the necessities of life. Last year eight of our thirty-nine mothers were working. We have, also, a large number of young Jewish children and a few children of graduate students and instructors.

At least half of the work of this school is carried on with the parents, whose coöperation is necessary for admittance. Five aspects may be noted. (1) There are frequent informal conferences between parents and teachers at school, on the street, and by telephone. (2) Teachers, especially the nutrition worker, visit fre-

quently in the homes of the children. (3) Parents are asked to visit and observe whenever possible. (4) Parents are urged to keep regularly one day a week at the school. (5) There are regular monthly parents' meetings.

Parents come to make application, recommended by the Habit Clinic, Children's Hospitals, and by social agencies. Frequently, a mother, while passing the school, sees children at play and wishes the same opportunity for her child. Children are admitted from our waiting list. The rules of the school require that the child be vaccinated before entering, that he come regularly, and that parents be coöperative. A fee of $1.00 a week is charged, but may be reduced to a half or even a fourth of that amount.

Fifty children two to four years old may be enrolled at one time in our two groups. There is no age distinction between these groups; we attempt to keep them as nearly equalized as possible. Because of room space there are twenty-three children in one group and twenty-seven in the other. For this number of children there are two regular teachers, assisted by the director and nutrition worker. During the school year there are also two practice students in each group.

d. Records. The purpose for which our records are used is to promote the teacher's efficiency and to enable students and parents better to understand the development of each child. We hope that some day the records may provide sufficient material for research.

We keep four types of records: social, health, educational, and a kindergarten questionnaire for those children who have entered kindergarten. The educational record is written for each child every three months by the head teacher in each group, after conference with the other teachers in contact with him. These records are largely subjective and are therefore initialled. They consist of a concise picture of the child's development in the control of (1) body, (2) matter, (3) speech, (4) sensory activity, (5) emotional activity, (6) higher mental powers, and (7) moral and social behavior. The questionnaire was built by our director in consultation with Dr. Johnson of Harvard.

e. Distinctive Features. Perhaps the most distinctive contribution of this school will be in the field of personality development, in which an intensive study is now being made.

11. The Play School for Habit Training[15]

a. Purpose. The Play School for Habit Training, North Bennet Street Industrial School, Boston, Massachusetts, is an experiment limited to one section of the preschool field. It was organized in 1922 to determine, if possible, the value of group training with children already so maladjusted as to be outstanding behavior problems to parents, visiting nurses, school, and social visitors. We wished to try this social adjustment, this reconditioning of poor habits and establishing of desirable ones, in association with the home situation which would continue to influence the child.

Our objectives defined themselves as follows:

1. To study the underlying causes of antisocial behavior and maladjustments in young children.
2. To experiment with methods for reconditioning wrong attitudes and establishing healthy emotional reactions.
3. To demonstrate what changes, if any, could be made in undesirable attitudes in a specially planned environment, and to determine, if such changes were successful, to what extent they could then be made to carry over into the home environment where the trouble started.

To accomplish these aims, our program covers the following points:

1. Special study and training in the school itself.
2. A careful evaluation of elements in the home situation.
3. Individual case records covering the child's school activities and, as far as possible, his home reactions.
4. Consultation and coöperative work with the clinic staff, with special staff conferences on the most difficult cases.
5. Such modification of the home environment as can be accomplished through contact with the mother in conferences and visits, and in coöperation with the clinic workers.
6. Follow-up work with the children who leave us for public school by means of an "after school club," by occasional conferences with their parents and teachers, and by letters and visits to those who move from our district.

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[15] This report, except for slight revisions, was written by Grace Caldwell, Director of the Play School for Habit Training, North Bennet Street Industrial School, Boston.

b. Organization. The school staff consists of four regular workers: a director on full time, a trained assistant on full time, an assistant on half time, and a student from a kindergarten-training school coming in a half-day for a three-month period.

The dircctor has general oversight. She works closely enough with the children to have personal knowledge of each child's problems and progress. Shc makes staff and family contacts and joins the full-time assistant in the record keeping.

Each assistant takes direct charge of a group. The student is usually assigned as helper with the younger children.

Our group is limited to problem children of preschool age. They are now selected by the psychiatrist in charge of the local station of the State Habit Clinics under the direction of Dr. Douglas Thom.

Each child comes to us with a case history made up of reports from the examining psychiatrist, psychologist, and the social visitor, with a tentative diagnosis of the problem and some recommendations.

When the child is admitted to the school, the mother is expected to report to the clinic for further advice in her handling of the problem. The social worker continues her visits. School and clinic report important developments to each other.

The enrollment is limited to sixteen and does not reach this number until the middle of the year, as we admit a new child only when the enrolled group shows fair progress toward adjustment. The children are registered between the ages of two and five years and remain as long as definite results are obtained. A portion of the group attending the play school in the morning are enrolled in public kindergartens in the afternoon. Whenever possible, the children are taken from families already known to us. We give preferencc to relatives or neighbors of these families. This policy affords opportunities for longer and morc intensive study of family situations and for sorting out factors not always apparent in our first contacts. Mentally deficient children are not admitted.

Our problem is somewhat conditioned by the fact that the school is located in a congested district of foreign born. The children are 95 percent of South Italian parentage; the remainder are of Jewish, Spanish, or Italian-Irish descent.

The economic status varies from borderline destitution to incomes averaging thirty to forty dollars weekly. Even with the most

prosperous, living space is pitifully limited, with its twin evils—noise and lack of privacy. None have bathrooms, and sleeping accommodations are inadequate. On the other hand, few families are without electric lights, gas ranges, radios, victrolas, and some boast an automobile.

An increasing number of the parents are American born, with good standards of physical hygiene. But mental hygiene, even of the simplest sort, is an entirely new idea to them, so that application of its ideas to their own attitudes and those of their children is a difficult matter.

In addition, it is essential never to forget the mental and emotional background created by the presence in every home of old-world grandparents, aunts, or godmothers, with the consequent conflict of ideals and atmosphere of confused values which is thus created for the children.

We are fortunate in the amount of room allotted to us. Consciousness of space and freedom of movement are two elements which our unstable group vitally need. They also need opportunity to withdraw from the stimulation of the group when its pressure becomes too great. It has been part of our problem to adopt for use space and equipment formerly used for other purposes.

The school occupies rooms on the third and fourth floors of the larger industrial school of which we are a part. On the third floor are the office, two play-work rooms of 271 and 350 square feet, the bathroom, and two corridors. In these rooms and corridors are the clothing lockers, washing facilities, the luncheon outfit, closets, and shelves for work-play material. Here the children rest, each with his individual rug placed on the floor.

On the fourth floor is a large play-work room of 700 square feet. One end is used as a carpenter shop, shut off when in use by a folding fence. The other end has a concrete floor which has a sandbox built directly on it, and allows sand play approximating outdoor freedom. In this large room are the piano, playhouse, carts, and kiddy kars. On each floor we have a Franklin stove, so that our children have the joy of open fires.

Outdoor space consists of a roof of 580 square feet. Here are the junglegym and slide. Carts, Page board, and kiddy kars are used in or out as weather conditions vary. In summer flower boxes

add the joy of growing things; in winter Christmas firs lashed to the fence give us green and snowy trees.

Because our children lack space for normal play in their own homes, special emphasis is placed on equipment for large-muscle development. We encourage a maximum of this type of play indoors as well as out. Even outdoor space is limited, and our children cannot endure with safety everyday exposure to dampness, wind, and cold.

To stimulate still further this type of play, we duplicate equipment. We have four kiddy kars for our small group, three carts, and five large snow and sand shovels. This means that many children may be engaged in the same play at the same time, with fewer inhibitory delays in purposeful activity, and that there is supplied an incentive for the social coöperative play so desirable with our problem children.

The children are encouraged to use all the material, except the tools and paint, voluntarily and without special supervision. Toys and work materials are kept on open shelves or closets. No division is made as to definite periods for work or play, nor is any distinction developed by us in the minds of the children as to the comparative value of either form of activity.

In accepting a problem child into group environment, we create a new situation and make new demands of him. Five vital essentials in handling our problem have been found: happiness in the new situation; emphasis only on fundamental values or habits; an atmosphere of pleasant matter-of-factness, sympathy, and understanding; ample space; and sufficient equipment of the proper kind.

In this environment it is possible to leave children free to go about their business of play. It gives scope for revealing self-expression, requires enough adjustment to measure their growth in self-control, and gives us opportunity to grade demands to their individual needs. We use responsibility as joyous opportunity, giving it or withholding it according to individual capacity.

Our program covers an eight-hour day with three main divisions of time. There is a morning session from 8:30 to 12 for our preschool group, an afternoon session three afternoons from 3:30 to 5 for the club group, and the remaining hours which are used for preparation, visiting, and records. The school is open five days

a week, eleven months of the year, with vacations at Christmas and in the spring.

There is no definite program for health work. All of the children report to child welfare clinics, where routine examinations are made, or are under the supervision of the school nurse.

We are a one-session school for three reasons: (1) The majority of our mothers have been well trained in proper child feeding by the child welfare nurses. We do not wish to interfere in their handling of this part of the child's home training. (2) We have felt, so far, that the children benefit more by hours in the sun and fresh air and by getting to bed at an early hour than by an afternoon nap. We emphasize this with the mothers whose children do not take a nap. (3) It leaves us time and strength for our work with the after-school group. We feel that this is an increasingly important part of the check on the value of our experiment.

Because each of our children presents a problem in reconditioning, we find it better to handle them in two groups. The division is made partly on the basis of age. The child who remains a second year automatically goes into the older group. But it is also largely determined by the plane on which the child seems to be functioning, regardless of his chronological or mental age. A child making a slow social adjustment may be better helped by association with younger children for a limited period. Just so a physically large, sluggish child may be helped by the stimulation of a group chronologically older.

The two groups are often together for work-play periods, and for special occasions such as a birthday party or holiday celebration. The older group assumes more responsibilities with corresponding privileges. Membership is a definite goal to be worked for and earned by responsible behavior. Children are often transferred in the middle of the year, and an event is made of this promotion.

In so far as the limitations of the group allow, free activity governs the program. The groups get together for washing hands, lunch, rest-period, and music. We feel that this is as much adjustment to a formal program as should be required from a preschool child. We have no definite time for toilet; each child goes as he needs.

Program of Activities

8:30–10:00	Free activity, inside or outside as interests vary.
10:00–10:15	Music.
10:15–10:45	Wash, lunch of milk and graham crackers.
10:45–11:00	Rest period.
11:00–12:00	Play-work period indoors or outdoors. Usually a short-story period for the older group.

The After-School Club meets three afternoons a week and as many more times as can be managed without the members neglecting other demands. The number of members varies from ten to seventeen, the ages from five to eleven years, and the group includes both boys and girls. The program covers any free activity the child desires, provided it does not interfere with others. We sometimes get together for music or games. But a typical afternoon may find one reading, two playing checkers, four doing carpentry, or four doing stunts on the roof. The freedom of this program gives us a splendid opportunity to gauge the children's habitual reactions in natural situations and is a most important part of our check-up of results.

c. Records. Record keeping is an essential part of our program. A daily diary record is kept whenever possible of every child. We try to record a picture of the child's habitual behavior reactions, notable exceptions, causes for these variations if found, his type of activities and their duration, and his mental or personal peculiarities. Parallel with this we try to picture home situations, type of coöperation given, home reactions of the child, and any physical handicap which may exist.

Our records are kept primarily for our own assistance in visualizing our task and estimating the value of our experiment. If certain methods are found successful with several cases or results crystallize about certain facts, we may find them useful in a larger field.

d. Typical Learning Situation. The following account of H. will present a typical picture of the process of learning in a case of bad behavior.

H. is two years and five months at entrance. His temper tantrums are so severe that he physically injured himself when in a rage. Negativism is so great that even a pleasant suggestion that he do something that we know he desires to do blocks all performance until he has had a spasm of rage, used profane language, spit, or struck.

He is of average intelligence, physically well, eats normally, has a two-hour nap.

Background. South Italian, first generation in this country. Fairly adequate income for parents and four children. Crowded living conditions. Marital unhappiness with resulting overemotional home atmosphere. The mother somewhat psychopathic; works outside the home at irregular periods. H. improves at these times; for he is in charge of his grandmother outside of school hours. The father is autocratic and jealous. The two older children have helped to spoil H. by giving in to his desires.

School Situation. H. loves school and attends regularly. He is social, active, interested, has no fears, but is mastered by his own desires. He has tantrums over slight causes, such as being asked to put away the comb he has forgotten. Often we cannot find a cause. He does not easily tire physically, but an emotional upset leaves him pale and exhausted.

School Methods. As few demands are made for social adjustment as common sense allows, but insistence is made on a minimum. Some manipulation of situations is done to avoid occasions for tantrums, also isolation when the emotional upset occurs, very quiet unemotional handling at all times, and a degree of wholesome ignoring.

Home Methods. The mother seems now more stable and quiet in dealing with H., is more intelligent in recognizing the problem and her relation to it; ignores his tantrums and no longer gives in to him.

Present Situation. H. has fewer tantrums at school and more often handles the situation by active resistance or slow acceptance. He seldom cries or kicks, and there is less exhaustion. He has changed from a scowling baby looking for trouble to a lovable and merry, mischievous little lad of three. But he has begun to stammer. We have reconditioned his attitude toward reasonable demands. He is happy, and gives pleasant coöperation. But we are questioning. In view of the development of stammering, was the temper tantrum, with its release of emotion, better at his age than regulated group pressure toward more stable behavior?

e. Distinctive Feature. In considering the distinctive feature of our nursery school—the attempt to retrain maladjusted children—it seems better to try to evaluate it both from the standpoint of its limitations and its advantages. Our experiment has raised many questions which only the future can answer. We realize certain dangers:

1. Overemphasis on a habit which would take care of itself with age.

2. Overemphasis on a habit resulting in a fixation either on the part of the child or the parents.

3. Impatience for seemingly tangible and permanent results by parents or experimenters.

4. The chance for overstimulation by putting too many young children in a group with a danger of a forced adjustment to too many personalities.

On the other hand, if the experiment is carefully guarded and results conservatively estimated, it would seem to offer opportunities for:

1. A better understanding of child behavior.

2. An evaluation of the relative importance of habit-values in the preschool age.

3. A recognition of the children likely to become social liabilities—potential troublemakers.

4. A record of methods used successfully with different types.

5. A more precise understanding of the degree to which personality can be changed in spite of home environment which cannot be much modified.

12. Preschool Laboratories at the Iowa Child Welfare Research Station[16]

a. Purpose. It was for the purpose of the scientific study of the child and for a dissemination of that knowledge that the Iowa Child Welfare Research Station, State University of Iowa, was established in 1917. Since its founding, the staff has been accumulating a body of knowledge in regard to child nature and child development that is now being made available through publications, lectures, and university and field courses.

One of the chief aims of the station is the training of graduate students. For this purpose, facilities for research are offered in the preschool laboratories, and opportunity for advanced study is given in University courses. These courses include mental and physical development of the child, child behavior, child management, household management, child study and parent education, the child in relation to the home, child nutrition, and the training of teachers for kindergartens and preschools. Emphasis is placed upon the study of infancy and the preschool age, since these periods are of such basic importance in child development.

[16] This report is a slight reorganization of the material written by Dr. Bird Baldwin.

Over one hundred investigations, either in major or minor studies in child development, are being carried out by members of the staff, graduate students, and investigators from other divisions and colleges of the University. Some of the studies have been continued for a period of several years. These include studies in the mental and social development of young children, in physical and nutritional development, and in special projects in parent education. This research furnishes laboratory training for graduate students, the foundation for courses in child development, and the basis for service in parent-education work in the state.

b. Organization. The first preschool laboratory was opened in 1921. At present there are five preschool groups of about one hundred children. Groupings are made on the basis of maturity and development, and the groups are so coördinated that the children progress easily from one group to the next with the succeeding years. From the Junior Primary, which is partly under the control of the University Elementary School, they go into the first grade of the Elementary School.

In three divisions, Group I, Group II, and the Junior Primary for children from two to five years of age inclusive, the children attend for one half day. The fourth division, the Preschool Home Laboratory, which opened in 1925, has been planned for children from eighteen months to five years of age. They attend from nine in the morning until three or four in the afternoon. Plans are being formulated for a few children to remain all night. Everything in this preschool home laboratory is designed for the benefit of the child. It aims to be a modern home based on the best methods of feeding, regular schedules for sleep and play, and training in mental development and behavior. This home environment under scientific management offers a new field of investigation in the needs and training of infancy and childhood, especially in the more complicated behavior problems. In the fifth division, which is a metabolism ward for infants, the children remain continuously for periods of from three to nine months.

These five preschool divisions are essentially laboratories for scientific observation and experimentation with young children, but the child is safeguarded in every respect, and his best development is the prime consideration at all times. Children are admitted to the preschools on the basis of physical and mental normality and,

to some extent, on home coöperation. No distinctions are made in regard to parents' occupations.

Parents are present at the University preschools daily, bringing and calling for their children and submitting reports of home behavior, and for group conferences at frequent intervals. The teachers visit the homes and every effort is made to integrate the home and the school.

In each laboratory group there is a teacher in charge and one or two assistant teachers who are with the children during the entire period of their attendance. In addition to these, there is a group of specialists, including nurses, nutrition workers, physicians, dental experts, educational specialists, and psychologists. Graduate research assistants, associates, and fellows in training in various phases of child development spend varying amounts of time in the laboratories. Close coöperation is maintained with other departments of the University, including particularly the Colleges of Education, Dentistry, Medicine, the Psychopathic Hospital, and the Departments of Psychology, Sociology, Speech, and Home Economics. An advisory committee, consisting of staff members, the director of the Station as chairman, a professor of nutrition, a professor of home economics, an instructor in pediatrics, and a psychiatrist, was organized for the Home Laboratory during 1925-1926. The staff and advisory council devote from one and a half to two hours every other week to problem cases. The aim is to integrate as many sciences as possible from the various departments of the University and to study the child as a unit; that is, from many rather than from a few angles.

For the child in these laboratory groups an opportunity is given to be placed in surroundings where everything is adapted to his needs and where he can follow his interests. A diversity of play apparatus affords ample opportunity for muscular growth and exercise of various kinds. Other materials offer training in the finer coördinations and in the development of perceptions and relations, according to the child's interests and developments. Materials suitable for his creative expression according to his changing needs are also provided. The teacher attempts to guide his life so that he may live happily and naturally, developing poise and happy emotional attitudes, building up desirable habits of self-direction, self-control, and respect for the rights and activities of others, and

learning through experience. She gives the child as much opportunity as possible for initiative, for carrying through his own purposes and for finding ways and means of meeting his own needs. The equipment and materials have been carefully chosen from the point of view of helping him to meet his needs and to express his creative interests. The teacher does not insist on perfection of product from the adult point of view, but rather guides and assists, since the young child derives his satisfactions more through the activity of accomplishing than through the end product. An attempt is made by the teacher in her contacts with the child to modify her approach in accordance with the child's understanding and development.

The programs for Groups I and II and the morning program for the Home Laboratory are much the same and are very flexible. They differ only in adaptation to the developing interests and accomplishments of the children. There is free play with many materials, story telling, music, singing or rhythm games, and group conversation depending upon the children's ages and inclinations. The members of the more mature group learn to carry out activities of their own planning, in which the teacher acts only as a counsellor. A light mid-morning lunch is served. Noon lunch and an afternoon nap followed by a play period constitute the additional program for the Home Laboratory. The physical set-up of this laboratory affords opportunity for emphasis on satisfactory adjustments of the child to home situations and the adaptation of home planning to the needs of the child.

The program for the Junior Primary children is built upon the theories in kindergarten, nursery-school, and primary-school work here and abroad, experimental educational activities, and modified school instruction. Its purpose is to train the child to be, as far as childhood permits, a useful, happy citizen of firm character and good social ideals. Subjects are studied from life rather than from books. The children who pass through the Junior Primary room into the first grade do so without experiencing the difficulties of the definite break between home and school life. They do so with the pleasure and satisfaction that come from being helped to find the answers to their many questions of "how" and "why" in their broadening world. Social contact with other children of his age

and group activity are important parts of the child's life in the laboratories.

The preschool laboratory building that houses Group I contains a main group room, a small pantry for the preparation of light lunches, a lavatory, and three small rooms for examining laboratories and individual testing and measuring. The group room is very light and sunny, with twelve windows on three sides. The heating system was devised especially for young children. In addition to the usual radiators, set out of reach, steam pipes are placed under the floor so that the children can safely play there in the coldest weather. This room is equipped for play needs and includes a variety of materials for occupational projects and apparatus for physical exercise. Outside there is a large grassy play-yard surrounded by a picket fence with trees and shrubbery. The equipment of the yard for play activities includes a small lake for warmer weather play in water, and garden tools for digging and planting. For days when the grass is wet there is a large wooden platform on which the apparatus may be placed.

The rooms of Group II of the Preschool Laboratory and the Junior Primary, including four supplementary examining rooms, cloak rooms and lockers, lavatories, and service room, form the northeast wing on the ground floor in the new University Elementary School. They have been planned on the same lines as the original Preschool Laboratory, now used for Group I, but for slightly older children; they have modern decoration and equipment, including special gymnasium apparatus.

The Preschool Home Laboratory is an old, well-built home that has been remodeled and furnished from the standpoint of harmony and beauty as well as of utility. The big playroom and the dining room are large, light, and homelike. Another unheated playroom opens on to the yard; it has a sand-box, work-benches, and the kiddy kars and wagons that the children take outdoors. There is a large sleeping porch for the afternoon naps. The pebbled play-yard has playground equipment and animal pens; the grassy yard has vegetable and flower beds. Every feature of this laboratory is planned to avoid substituting the institutional and school atmosphere for the home atmosphere.

The metabolism ward and nutrition laboratory are located in the Children's Hospital. Here the work is primarily with infants

who are under constant observation for a twenty-four-hour period for several months. In coöperation with the College of Medicine this division in nutrition is developing practical methods of stimulating growth and preventing malnutrition during the preschool age.

c. Typical Learning Situation. The following account will be illustrative of learning in a typical situation:

Child D. had been dawdling over her food. From November 10 to January 3 she had spent on an average 49 minutes eating her lunch, though other children finished easily in half an hour. On some days her time ran up to 69 minutes; her lowest record was 37 minutes. A group of the worst dawdlers, including D, was taken into a separate room for the lunch period and the method of urging the children to eat was abandoned. Here a detached, indifferent attitude toward the eating of the food, but a pleasant friendly manner in general, was maintained by the person in charge. For three days, the children were allowed to take all the time they wished, with no comments; then for fifteen school days they were allowed 35 minutes, and, if not through, the food was removed without comment, except on the first day, when a warning was given. D. was absent the first two days of the preliminary period, but spent 68 minutes on the third day. During the fifteen-day experiment D. finished in 35 minutes or less on 9 days. She had been successful 60 percent of the days in finishing within the time allowed. Putting her on her own responsibility rather than allowing her to rely on adult attention thus resulted in her finishing the meal within a reasonable amount of time, with less emotional strain and fatigue for child and adult.

d. Records. Detailed record blanks of the various phases of the child's development are kept in each of the laboratories. In the Preschool Home Laboratory special emphasis is placed on behavior and control habits. Therefore many records are kept: the initial parent interview, summary sheets of behavior problems determined through parent interviews and through behavior at school, initial record of toilet habits in the home, daily home records, supplementary home records to cover longer periods of time, daily school records of sleep and toilet habits, periodical records of control, habits connected with arrival and departure, dressing and undressing, toilet, resting and sleeping, eating and drinking, and daily staff notes. In addition to these, daily records of attendance and of health conditions are kept in each laboratory group. An information blank giving the present status and interests of the child and a brief developmental history is filled out by the parent

at the time that application is made for enrollment. Monthly summaries of physical measurements and of the daily health examinations which are made by a trained nurse who is a member of the laboratory staff are furnished the teacher by the specialists in charge. Periodical summaries of medical and dental examinations are also furnished. On mental development the teacher has access at any time to any experimental data concerning her group of children. She is given periodically a summary of the psychological examinations for each child. These include such abilities as the perception of form, size, shape and color, motor control, learning, intelligence, language, vocabulary, apperception, memory, classification of objects, concepts of number, time, weight, emotional and personality development, social attitudes, and speech development. She makes analyses of the educational needs of the child from time to time, recording the habits which need modification, and the recommendation for preschool and home coöperation. Special records are kept whenever an intensive study into any one phase of development is undertaken.

e. Distinctive Feature. The Iowa Child Welfare Research Station serves as the coördinating center for all the work in child development and in child study and parent education that is being carried on by the three state educational institutions and various public school systems in the state and is coöperating directly with various state organizations interested in child life.

13. Smith College Coöperative Nursery School[17]

a. Purpose. The Smith College Coöperative Nursery School (formerly the Northampton Coöperative Nursery School) was organized in 1926 by the Institute for the Coördination of Women's Interests at Smith College, as its first demonstration.

The purpose of this experiment was first, to find out whether a nursery school as a coöperative project can be carried on by a group of parents sufficiently interested in such a school to undertake the effort and responsibility required, and to continue it for a period of years. Second, to provide simple forms of organization, costs, and methods which an average group of mothers with pro-

[17] This report was written by Dorothea Beach, Principal, Smith College Coöperative Nursery School.

fessional or individual interests might use in whole or in part for a similar project of their own.

These purposes define also the limitations of the project. The school was projected as an educationally-sound nursery school, but not as a center for educational research and not as an institution for teacher-training, although students electing the course on "The Pre-School Child" in the College Department of Education observe in the school.

b. Basic Educational Principles. The general purpose of any true nursery school may be simply stated as achievement for the preschool child of right mental and physical development and guidance into good habits. The first is very largely the result of the second. It is further insured by leading the parents, particularly the mother, to understand the specific needs of her own child; and to understand, through her own participation in the work of the school, the school's methods of meeting them.

c. Organization. The staff includes a director, who is Chairman of the Department of Education, a principal, assistant principal, head teacher, teacher, and the principal of Smith College Day School.

Through the Department of Music, special opportunity for rhythmic expression is given the children once or twice a week. The college physician acts as a general health consultant. The children's posture pictures are taken twice a year by the Department of Physical Education. Occasionally, parents have consulted the psychiatric consultant of Smith College, when he came for his regular visit. It is evident that a nursery school with limited funds is unable to develop this side of the work to any extent unless it is in a community where such service is without charge.

In the Demonstration House of the Institute for the Coördination of Women's Interests certain quarters were allotted to the use of the school, for which rent was paid to the college by the Parent's Organization. The house itself is a large, three-story, many-windowed, white, wooden structure, facing north and abutting at the south on one of the college hockey fields. A well-fenced, though small, sunny yard gives good outdoor space, and a gate in the back fence enables the children to play in the hockey field when it is not in use by the college girls.

The double-parlor plan of the house on the ground floor is duplicated by the two rooms directly above. These four rooms are used as schoolrooms. The rooms are on the west side of the house, and the south room on each floor opens directly on a large square porch. Thus the two double playrooms are encircled by all-day sun, except on the east. The room on the east side of the house is used by the school as an office. The front hall is sufficiently roomy on each floor to permit individual pigeonholes or lockers. There is a large, well-equipped kitchen directly adjoining on the southeast corner. Lastly, the lavatory on the ground floor has low and small-sized equipment for both closet and lavatory.

This stationary equipment and the general furnishing of the rooms were provided by the College in contribution to the Institute. The school itself has provided all hangings, cupboards, lockers, and all movable equipment, including children's furniture and china, actually required for the use of the children.

The effort was made to buy the best types of equipment possible for the smallest amount of money, keeping always in mind the limitations of a self-supporting, coöperative project. Authorities are not yet agreed as to the most suitable educational equipment for the nursery school, but we are experimenting and shall add our experience to that of other schools. Outdoors there are a teeter, slide, swings, trapeze, rope to climb, sand-box, digging hole, piano box, some packing-boxes and boards. Snow shovels and sleds are added during the winter and, in the spring, carts, velocipedes, a doll carriage, kiddie kars, and garden tools. The indoor equipment includes blocks of various sizes, color cubes, scissors, paste, crayons, water-color paints, beads, peg-boards, clay, dolls and dolls' beds, a small wash-tub, wash-board and clothes-reel, work-bench with carpentry equipment, hammer and so forth, small brooms, dust pans and dusters, books, balls, some gold-fish, and a canary bird. Throughout the house an effort has been made to create a thoroughly homelike atmosphere.

The children begin to arrive at 8:30 A.M. Before removing their wraps, they go to the office where the nurse looks down their throats and gives them a general examination. If a throat is too red or a nose runs, the child is sent home with the parent, who has waited until after this inspection. After removing wraps they hang them up, each in his own pigeonhole, being as self-reliant as pos-

sible in the process. Then a drink of water awaits each child just inside the playroom door. After that is finished, the child settles down to some occupation or play—if a floor play, on his own little washable rug which he spreads for himself. He is observed and supervised when necessary, but the plan is to leave the children as free as possible that they may develop initiative, self-reliance, imagination, concentration, and coöperation.

About ten o'clock the toys are picked up and the children gather for group activities which include singing around the piano or sitting on rugs for 'news' or some rhythm work or games. After fifteen minutes of this, the children sit at their little tables for their mid-morning lunch which consists of milk and graham crackers. Then five or ten minutes of relaxation lying on their rugs on the floor follows before it is time to put on wraps and go outdoors.

The children play in the yard or take a walk until about noon. Then those who stay all day come into the house to wash, and rest on their cots upstairs before dinner, while those who go home at noon are called for by their parents.

Between 12:00 and 12:30 the all-day children sit down to dinner. Food is brought on individual plates to a serving table in the playroom. One child from each table is allowed to serve the others at his table, carrying plates on small trays. Each child, as he finishes his dinner, carries his empty plate on a tray to the kitchen and returns with his dessert. He is permitted to pour his own serving of milk.

Shortly after lunch they are on their cots ready for naps, having had on their soft slippers from the resting time before dinner. After sleeping for an hour and a half, they dress and go outdoors until they are called for not later than 4:30 P.M.

This régime is not as stereotyped as it would seem in print, for our plans depend entirely on the weather. We keep the children outdoors as much as possible, and fit the indoor régime around the outdoor time.

In enlisting the child's coöperation, the following general methods have been most successful: (1) emphasis on success either in accomplishment or in physical or emotional self-control, (2) control of the situation to assure success, (3) creation of opportunities for exercise of these aspects of behavior which need development,

(4) changes in unfavorable child groups by a redistribution which apparently is incidental to activities, (5) quiet insistence upon the fulfillment of a necessary condition before passing to a new interest, and (6) the use of music to catch and redirect attention or to transform restless noise into rhythmic and pleasurable activity.

The children all come from the same type of home. Half of them are children of college teachers and half of townspeople in the same general cultural and economic group. All have superior intelligence. Throughout our contacts with the children, efforts are made to analyze the home situation for possible causes of behavior difficulties. The coöperation of parents is enlisted. The assisting mother in the school is a great help in interpreting to the home what the school is trying to do.

General physical examinations are made by the individual family physicians. Advisability of consulting specialists about difficulties with eyes, ears, etc., is discussed with parents, but responsibility is left with them.

The entrance requirements are:

1. Age two years to five years.
2. Normal physical and mental development.
3. Toilet habits established.
4. Ability of parents to coöperate in the group and contribute their share of interest, assistance, and financial support.[18]

The number of children enrolled is twenty-two. Half of them attend the school during the morning only—from 8:30 to 12 o'clock noon. The other half spend the day and are called for between 3:00 and 4:30 P.M.

Eleven children per teacher is the maximum, but an assisting mother is on hand regularly except at dinner and nap time, and most of the time there are observing students who assist as needed. There are always three, sometimes four, adults to care for not more than twenty-two children.

In 1926-27, the two- and three-year-old group was kept quite separate from the four- and five-year-old group. This year we tried the experiment of not holding purposely to this division, but it has been interesting to note that in general the older children have gravitated to the second-floor playroom where the older occu-

[18] A few nursery-school scholarships are available when there is a real need of financial assistance.

pations are in progress and the younger ones have stayed downstairs. The group classification is based on maturity and ability.

The nursery school is financed by the coöperation of the Parents' Organization and Smith College through its Department of Education.

d. Typical Learning Situation. This story illustrates typical learning by group control:

> John came down the yard crying. Paul and George met him.
> Paul—"What's the matter, Johnnie?"
> John—"Carl hurt my finger!"
> Paul and George marched over to Carl.
> George—"Did you hurt John's finger?"
> Carl—"No, Cynthia did."
> Cynthia—"No, I didn't."
> Carl—"But, I didn't mean to."
> George and Paul—"All right."
> They came back to John, saying: "He didn't mean to."
> John stopped crying. Later, Carl came to John and said he was sorry.

e. Records. Records, in so far as they are helpful at the present time or would become suggestive in the future dealing with the child, are important. These should include records of attendance and reasons for absence, height-weight charts of some simple sort, physical history, posture pictures, mental and emotional development, character traits, and social adaptations. We have found such records useful in conferences with parents. In addition to these, a very brief record is kept of the conclusions about the child which have been reached in staff conferences, together with recommendations to be made to the parents. Our staff is too limited for much record making, and we are not quite sure how much of it is of vital importance to a nursery school not established primarily for research purposes.

f. Distinctive Features. The most distinctive features of our school seem to be:

1. Its coöperative organization.
2. The assisting mothers (the assisting mother's rôle as exercised in the Cambridge Nursery School was our starting point).
3. The simple, happy, homelike atmosphere of the school.

The nature of this school enlists the parent's interest and enthusiastic coöperation. Through these channels large opportunities

for parental education are given the teachers. Our experiences lead us to believe firmly in the idea of the assisting mother and the coöperative school.

14. The Walden Nursery School[19]

a. Purpose. The idea that the first five years of a child's life are most significant, most plastic, and therefore most creative educationally, is the cornerstone of the philosophy of the Walden School. Thus, fourteen years ago when nursery-school ventures were still for the most part practical devices for saving tired, working mothers, the fundamental keynote of the philosophical and psychological structure of the Walden School was struck. This was done by developing a spontaneous community environment for children from two to four, planned on the basis of their needs. The specific curricular problems in the school change from year to year as the children gain in experiences. The basic ideas, however, are the same throughout the school. This makes the nursery a unified, integral part of this free school whose setting evolves around the life of the child.

We have attempted to find a tool which would help to measure the delicate inner life of children. We wanted to gauge how best to meet the deep-felt needs of every individual, so to harness the instinctive drive of the little child as to lead to completion and security. A psychology which seemed to us to go beyond the discoveries of the sensory psychology and give a deeper motivating drive was analytic psychology. This study of the unconscious seemed to give a more satisfying answer to many problems of child development. The fact that all maladjustments in later life could be traced back to the influence of the first five years seemed to us to corroborate the observation of the simple primitive life of young children at play made by people interested in a new and genuine child study. Observation showed a much deeper, more complex, and more significant psychology in young nursery-aged children than educators had supposed.

Because of the plasticity of the young child, it seems to us, we have at the nursery age the most productive period educationally,

[19] This report, except for minor revisions, was written by Elizabeth Goldsmith, Co-Director and Psychologist, in collaboration with Alvie Nitscheke, Director, of the Walden Nursery School.

and the most responsible. There are many problems still unsolved; we can only feel our way, making honest observations and setting the stage with what we feel are the instinctive needs of children.

b. Basic Educational Principles. Those of us having the opportunity of watching natural, spontaneous toddlers grow in the modern nursery-school environment realize that this is the only age in which anything can really be taught. It is the period in which habit-formation can genuinely be effected. It is the only age in which negative influences, such as fears or over-compensations for fears, can be definitely staved off. It is the only age in which the child's organism can be reached directly without having to react indirectly to the structure already deeply affected. After this age we can, it seems to us, only create an atmosphere to which a child reacts in a more or less positive way. Hence, in the nursery school everything that is done, or not done, has vital significance.

One of the most far-reaching objectives of our nursery school is to afford a habit clinic both for parents and children. It is undoubtedly the most fruitful period to influence parents towards an objective understanding of their children. It is also the time to help them towards a consecutive educational procedure and psychological understanding of a particular child, which will help him to reach his highest potential fulfillment.

In the all-day situation a child is helped to overcome faulty habits of eating and sleeping. Through the objective environment of the school the overemotional power reactions he so frequently has in relation to these routine habits at home are eliminated. He gains a sense of responsibility towards himself and towards the community of which he is a member.

We feel that development is ordinarily onesided. Even nursery schools and most homes push the factual acquisitive side of the child and try to erase too quickly or completely many instinctive reactions which seem to us to be rich and varied. The civilizing process, for instance, in the form of the social objective, can, it seems to us, be pushed too early. Often a child is pressed into a social mould when his instinctive development is still in a highly individualistic phase. Every time the child is interfered with, when some work or some mode of conduct is imposed upon him when he might have chosen for himself, he will be less fit to learn by experience. Every time he is externally controlled when he

might control himself, he will be less fit to exercise self-control. To be master of himself, even in the case of the very little child, in the selection of work or the mode of behavior must bring with it joy and lasting satisfaction. In the relationship between teacher and child, therefore, we try to make an informal, happy contact in which the teacher definitely avoids an overemotional attitude or an overpositive or dynamically influential one. It is our attempt to approach each individual child in such a differentiated way as to compensate for difficulties at home.

Psychoanalysis has deeply affected our handling of sex problems. We emphasize in our frequent conferences with parents the need of answering questions of little children about birth and their bodily structures, this to be done in a natural, simple way at the level of the understanding of the child.

We feel that much can be learned as to the inner life of children from their primitive play, interpretation of pictures and imaginative stories. Much of their subjective life is expressed in symbolic actions. Therefore, much of the interpretation of the understanding of their conflicts depends on the understanding of these factors rather than on verbal articulation. In general, after fourteen years, we feel that we are just commencing to grow into a definite form, which, although still uncrystallized, marks our educational and psychological approach towards young children.

c. *Organization.* We have tried at school to create an environment which is homelike, not institutional. We try not to have the routine so pronounced that the creaking of the machinery is heard.

The mastery of his body is probably the most important factor in the child's gradual adjustment. For this reason and for a feeling of independence generally, the environment is equipped with many kinds of apparatus leading to muscular control. The whole environment is a child's world with child-size equipment.

The youngest nursery group consists this year of sixteen children ranging from two years and eight months to four years. We ordinarily have three groups before our first primary-age level: a group of children from two to three approximately, three to four, and four to five.

In order to effect habit formation at all, the nursery is planned for all day. This is in accordance with the rest of the school, although for children up to seven years it is not compulsory. At

present, just half of the children in the first nursery group stay for lunch and the afternoon session up to four-thirty. The rest of the children leave at noon. In the case of groups ranging up to five years of age, approximately two-thirds of the children stay for the all-day plan.

Each one of the nursery groups has a director and an assistant who take over the direction of the activities for the day. They work in coöperation with the psychologist and the school physician in relation to emotional adjustment problems and the physical health of the children.

The school has taken over four typical city buildings which have been chiefly decorated by the older children and which resemble home situations much more than the typical school environment. The two nursery groups are on one floor, each having two rooms. Both lead on to the large roof playground, equipped only for children of this age. We use the simplest kind of equipment, carried out chiefly by our own school carpenter, and created by people working with children and understanding their needs.

The two rooms for each of the nursery groups can be opened to make one larger room if so desired. One of these rooms is used chiefly for quiet work, such as painting, modeling, stringing beads, playing house, etc. The other is used for more lively play, such as ball playing, riding kiddy kars, playing zoo or taking trips on boat or auto. In this latter room we also have a work-bench, equipped with light hammers and little saws specially chosen, a vise, nails, and a box of wood.

The roof is equipped with apparatus particularly suited for developing the larger muscles. Here we have swings of various kinds, including a tire swing and a rope ladder. The slide is always popular; by the end of the year each child is able to come down in at least three different ways. The sand-box is in one corner of the roof and is equipped with non-rustable toys. We use kitchen utensils, as children seem to prefer them to toy dishes. Much dramatic play is carried on in the sand-box.

Our materials generally are of a twofold nature. Some afford opportunities for bodily experimentation and control. Others, of a creative nature, are stimulating to expressiveness, to finer muscular control, to experimenting with mediums leading to newer and richer experiences. All of the equipment is within reach of the

child, and organized to leave the teacher as much as possible in the background. The daily routines are thought of in terms of self-activity on the part of the child. Wire baskets with different colored worsteds are furnished so that the young child can identify his own place to put rubbers, coats, etc. We have found that this method of putting away clothes is simpler than the usual hook to hang clothes on. Simply constructed racks have been built for towel and washcloth with a little design which represents to the individual child his own place.

The program of the day is based solely on health routine. All other activities are entirely within the choice of the children. Thus, the first hour of school is spent indoors, the rest of the morning and afternoon outdoors if the weather permits. Children walk freely in and out from the roof playground to the rooms, getting new materials to play with. Lunch and rest time are organized so that the children will have plenty of time to accomplish as much as possible by themselves without hurry and anxiety. They have their lunch on their own floor so that their world is complete within the few rooms allotted to them. We have worked out a device for cots in their own playroom. These are attached to the wall and covered during the play time by colorful screens painted by the older children.

An attempt is made to have a representative group. Our children come from different kinds of homes—workers' homes on the east side, professional people's homes, and the elaborate homes of the very wealthy in a large city. Hence, our problems in habit-formation vary extremely. They range from children who have been left to themselves entirely without any attempt at setting an environment for the needs of children of this age to children who have been so supervised and guarded that their innate curiosity and activity have been stifled.

As is true of all nursery schools to-day, there is a large waiting list. Younger sisters and brothers of children already in the school are given precedence for the nursery. There are no entrance requirements, except the usual ones of having parents visit the school, understand its general philosophy, and show their willingness to coöperate.

d. Records. We probably do less formal classifying of the children than do most of the nursery schools. We have health

records and physical charts similar to those used in other nursery schools, tabulating daily physical adjustments of the children. Our great interest, however, is in keeping consecutive records of the emotional adjustments of children. Starting with infantile history and the attitude of the parents towards the children, we keep these records consecutively through their first adjustments in the school. The records are written very much in the spirit of analytic psychology or in the general attitude of mental hygiene, rather than on the basis of activities.

e. Distinctive Feature. We feel that the most distinctive features of the Walden School Nursery are: first, that it is an integral part of the whole school philosophy and organization; second, that we are doing research along the line of a special school of psychology and writing records of the emotional development of children; third, that we try to interfere as little as possible with natural instinctive development; fourth, that we keep the environment as uninstitutional and informal as possible; fifth, that we keep the natural creative impulse of the child alive and do not encourage too much emphasis on external achievement.

III. Summary

A study of these descriptions of nursery schools in action reveals many facts of significance and brings important questions to mind. What has been gained through these ventures in nursery-school education?

1. Purposes

Inasmuch as the schools were selected according to the varied types of work they represented, one might expect comparisons to show more differences in procedures than similarities.

Although many differences are noted, one general point of agreement is evident: namely, that practically every school, either by direct statement or implication, shows that its chief concern is to secure for preschool children the best possible conditions for meeting the needs of growth. From this fact we may infer the need of nursery schools of different types, if the children of all classes living under different conditions are to achieve their best growth.

It is obvious that schools stressing parental education must draw their instructors from centers where students in parental education and child guidance are securing the necessary training.

It is obvious also that schools stressing teacher training, viewing the nursery school as the first step in organized education, must equip their teachers with methods of work that will meet the changing values in education. Teacher guidance, formulated on the basis of direct observation of the behavior of nursery-school children and on an analysis and evaluation of the techniques used to change behavior, approaches the scientific method and leads to an appreciation and recognition of the laboratory and research type of preschool institution to which problems may be referred for more detailed study.

The contributions from the public and some of the philanthropic nursery schools show best what is actually being done as an outcome of all efforts to discover and bring about the most desirable learnings for preschool children. The selection of the environment, the size of the groups, the social organization, the teaching techniques, the flexibility and content of the day's activities, the program of work with parents, the types of records, and the use made of them, and many minor aspects of procedure in many of these schools have been directly influenced by the work done in the laboratory and experimental schools. On the other hand, in some of the public and philanthropic schools the purposes which have been set up can never be realized until some of the procedures are changed and brought into accord with established facts about the needs of growth.

Some of the questions raised by these articles lead to the conclusion that each school might well be better informed concerning the plans and purposes of all the others for the special reason, if no other, of making needed changes in its own procedure. Are the research centers spending time on the most important problems to be solved? Are other schools formulating their problems and referring them to these laboratory centers for the needed help? Certain schools should be highly commended for their attack on such vital problems as lie in the fields of nutrition, hygiene, and emotional adjustments.

2. Philosophy

The accord in educational principles presented in these articles is remarkable. Nothing of the sort could have occurred a few years ago. As a group, nursery-school educationists have become

articulate. Sound educational doctrine as applied to the very young child is accepted. There seems to be particular agreement on such points as learning by doing, freedom of children to choose activities, the use of satisfaction and dissatisfaction as a means to learning, and the functions of the teacher as a guide in activities.

One school states that "the education of children of nursery age means guidance into good habits." This is true and unquestionably stresses a most significant aspect, but it also raises a question: should there not be some warning against the danger of too great emphasis on routine habit-building? Some schools seem to be developing a mechanistic point of view in their philosophy of nursery education.

The question of habit-formation deserves critical study before it can be decided what habits and what degree of perfection should be expected or taught to a child of eighteen months, two years, or three years. May standards not be skewed when one aims at perfection? One school holds a constructive questioning attitude toward the advisability of building certain controls with certain children. Another school presents a point of view that is almost an extreme reaction against too much emphasis on routine habit-formation. The solution of this problem must be based upon the educational principles which have been so uniformly set up by these schools.

Practice and principles should show agreement. It is important to note how far this common accord in principles is carried over into practice. From such items as number of children in the group, number of teachers, quality of teaching, stability of the teaching body, the conception of a learning situation, social organization and programs, the amount of agreement may be determined. Thus, if a school says that it is most important to give children opportunities for choice and self-initiated activities in an environment which they are, to some extent, able to control and yet a scrutiny of the program shows about twenty minutes of undictated play in a learning situation which stresses the technique of orderliness with little opportunity for initiative, it is apparent to the most casual reader that practice does not agree with principle in this school.

Evidently, in the present stage of nursery education, accord in educational principle does not mean standardized practice. This

is probably a good thing, as it tends to retard the taking over of a "system" of early childhood education until such time as there shall be no break between principle and practice. In the meantime the discovery of the present short-comings should be thought-provoking. If those engaged in practice with children could be reminded sufficiently often of the relation of the principles which underlie practice, there might evolve methods which would be a living, breathing embodiment of the accepted theory.

3. Programs

The programs vary from the formality characteristic of the conservative kindergarten and primary school to extreme flexibility and freedom. In one school emphasis is placed on adherence to a program arranged in units as short as five minutes. Practice may not, however, be as stereotyped as it looks in print. One report makes this qualification by adding, "Our plans depend entirely upon the weather. We keep the children outdoors as much as possible and fit the indoor régime around the outdoor time." The outdoor program is generally stressed by all. In meeting the needs of children physically less mature, and consequently more dependent than any other school group, nursery-school teachers have set a standard that is to be commended.

4. Organization and Staff

A significant fact revealed by this series of papers is that most nursery-school centers are conducted in close affiliation with a larger educational body. This lifts from the nursery school such a tremendous financial burden that the question arises whether the nursery school as an independent educational unit will ever be practicable or profitable. How many and which of the services carried on by the parent body are essential to the nursery school?

It seems to be conceded that mental and physical health must be the business of the nursery school to an extent demanded of no previous educational venture. These are basic—the very *raison d'être* of the nursery school. The problem then arises: can a nursery school, not connected with a research center, have a staff of specialists sufficient to carry out an adequate program in mental and physical health? Manifestly, the scientific procedure found in the large research centers cannot be duplicated except at great

expense. Some of the articles furnish excellent descriptions of the methods by which such a coöperative service may be carried on. Can it, however, be exercised except in nursery schools which serve a restricted economic group? Will it be found, as in clinical service, that the middle class is left untouched?

The schools that have added a nursery group to their upper classes indicate that there is a middle course. The nursery school shares with the school, as a whole, its health program including nutrition and provisions for dealing with behavior problems, and has, for these services, no special staff of its own. Even in such cases, the nursery school will cost more per capita than any other department, but the cost may not be prohibitive. It is significant to note that the public-school experiment in nursery-school education has been carried forward with no compromise in standards—a contrast to the entrance of the kindergarten into public-school organization.[20]

We cannot equalize the cost of this department with that of others, but can we justify it? Is the prekindergarten age so basic in laying the foundation of early mental and physical health as to justify the expense?

5. Age-Range and Group Classification

Children are grouped in rather wide age-groups; the narrowest range is 12, the widest 42 months. The largest number of children in one group is 30, the smallest 15.

It is impossible to judge the number of children per teacher. Many schools use student assistants, in which case the number shifts. Obviously, the age of the children must determine the number under the care of one teacher. Of the schools that specify the number, one gives three, one seven or eight, and one twelve to fifteen.

The question of numbers, together with all other conditioning factors that enter in, might well receive critical attention in all nursery schools.

6. Length of Session

The length of session varies. Two schools offer a choice to the parent; one school allows its plant to be used for afternoon play

[20] See Chapter IX.

and provides, at those hours, some supervision. The three schools that have their affiliation with child welfare organizations extend their hours at both ends of the day to accord with day-nursery practice and with the needs of the out-family mothers. The public-school nursery conforms to public-school hours for children in session all day. By and large, the tendency seems to be for an all-day session. One reason for this is, without doubt, the recognition given to the educational importance of establishing right habits of eating and sleeping.

7. General School Environment

In insistence upon a satisfactory environment the schools are in complete accord. It is apparent that all are real places for living, with adequate space and suitable equipment for play out-doors and indoors, and for eating, sleeping, and use of toilet. Right health habits can be learned only if there is provision for practice. This is in striking contrast to much of the work in the elementary schools where the effort is made to teach health habits chiefly by talking about them.

Emphasis is given in some reports to simple equipment made by local carpenters. This seems desirable, especially from an experimental point of view. Commercial equipment is often expensive, stereotyped, and not adjusted to individual needs.

There seems to be adequate provision for materials for creative and aesthetic experiences as well as for motor development, although there seems to be wide variation in the importance attached to some of these materials.

Most of the schools emphasize experimental creative, rather than didactic or self-corrective, materials for little children. Some of the schools have a combination of the two. The Montessori materials which are didactic are used as the main materials in Montessori Schools, but as supplementary materials in some of the others.

8. Parental Education

The admirable work done in parental education deserves special mention. Each school, according to its purpose, has a somewhat different problem in this field. Through the influence of the nursery school parental responsibility has been increased rather

than lessened. One school has accomplished the almost impossible, for it has unquestionably reached, and is functioning with, the working mothers.

9. Records

Records vary with the purposes of the school.

Should there not be more thought and effort given to devising and providing adequate mechanical helps for record keeping? Some experimental work is being done along these lines. Teachers should be trained to use discrimination in what they record, to interpret data, and to present only the essentials for the guidance of parent and teacher. Some of the research laboratories have the needed facilities for record keeping, but it offers a genuine problem in the average nursery school.

10. Special Contributions of Nursery Schools to Educational Thinking

In the expression of their purposes, in their plans of organization, and in their estimates of their own distinctive features the schools in general show soundness of purpose, execution, and achievement that have set new standards in educational values for preschool children.

Possibly the most outstanding practice of all these schools is their contact with parents—their realization that the education of the child is a twenty-four-hour-a-day problem, dependent upon the closest coöperation of all who contribute to any part of the child's social environment.

In sharing the responsibility of providing for needs of growth throughout so many of the child's waking and sleeping hours, the nursery school from force of circumstance has directed attention to all aspects of growth. In consequence, there is a balance in the planned environmental experiences never before achieved in school régime. Many of the learning situations provide for physical welfare, emotional life, and personality adjustments. As parents and teachers of the young child seek to discover causes of learning and to set the right conditions for its progress, is there not justification for believing that teacher-parent guidance will achieve results reaching far beyond the preschool years?

11. Conclusion[21]

The educational ladder of the American public-school system is a tall one and a stout one, but it does not reach the ground. At least, it does not have a solid footing. In towns of 2500 or more, one out of four of the children between 4 and 5 years attends kindergarten. Only a small proportion of infants have the safeguards of continuous, periodic medical supervision, either by family or health-center physicians. A very small number attend nurseries with educational and hygienic advantages. Parents continue to exercise their natural prerogatives in the complicated task of rearing children, but without systematic preparation and guidance.

The significance of the nursery school lies in the fact that it represents a deliberate attempt to furnish a more solid support for the educational ladder. These schools are still too few in number and too varied in kind for one to predict the course of the movement. But they are multiplying, and they carry both challenge and promise.

Clustered about the base of the ladder now are four types of child-welfare agencies: the infant health station, the nursery school, the kindergarten, and the home. All of these agencies are concerned with maintaining the health and development of the preschool child. The hygiene of the preschool child is a natural unit in the field of social endeavor. Only when these varied agencies are brought into many-sided coördination will the ladder of childhood have a firm foundation.

IV. Nursery-School Equipment

The list of equipment that follows represents an arrangement showing all items that appeared on any list reported in response to a description of plan of organization "as reflected in equipment." These have been alphabetically arranged and classified according to use, as outdoor equipment, indoor equipment, luncheon equipment, sleeping equipment, or bathroom equipment. A book list is added. Items designated by asterisks are those listed by five or more schools.

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[21] Adapted from Arnold Gesell: "The significance of the nursery school," *Childhood Education*, September, 1924, by permission of the author.

1. Outdoor Equipment

Automobiles
Auto tire swings
Balance rods
Bars
Bicycles
Blocks
Boards (inclined boards)
Boxes, portable
Carts
Climbing horses
Coasters, wagons
Dump carts
Garden tools
Houses for animals
Jumping ropes
Junglegym
Kegs
*Packing boxes
Page board (for walking)
*Peddle kiddie kars
Piano boxes
Play house
Pushmobile
Rabbit pen
Rope ladders
*Sandbox sand
*See-saws
Skooter
Sleds
*Slides, large and small
Snow shovels
Steps—and platform
Steps—and runway
*Swings
Toys (non-rustable for sand)
Trapeze
Velocipedes
Walking beam
Wheelbarrow
Wooden engines
Wooden ladders

2. Indoor Equipment

Animals, toy,
  Riding bears
  Stuffed
*Balls, rubber
Baskets for carrying toys
Bells
*Blackboard and chalk
Blocks
  Cubes and cylinders
  "Hill"
  Large building
  Large hollow
  *Miscellaneous
  Mosaics and Pyramids
  Nests of
  "Trace"
Bowls for bulbs
Bowls for washing tables
Boxes for planting vegetables and flowers
Brass polish
*Brooms
Brushes
Butter molds
Cabinet for Montessori material
Celluloid toys
*Chairs for doll corner
Chairs, rocking
*Chairs for children
Chest for blocks
*Clay
Cloth (colored cheesecloth)
*Clothes lines and pins
*Colored beads
Colored cubes
*Crayons
*Cupboards
Dolls
  Bisque

* Items listed by five or more schools.

*Schoenhut
*Stockinet
*Doll beds
*Doll carriages
Doll clothes
Doll covers
*Doll dishes
*Doll dresses
Dust pans
*Easels
Fire engines
Glitter wax
*Hammers
Hand-mops
Iron sink
*Ironing board
Kitchen utensils
*Lockers
*Montessori material
*Nails
Page board
*Paint
Alabastine
Poster colors
Water color
Paint brushes
Paint cups
*Paper
Construction
Colored
Crepe
Unprinted news
Wall
Wrapping
*Peg boards and pegs
Pets
Canary in cage
*Goldfish in bowl
Guinea pig in pen
Turtle in bowl
White mice in cage
*Piano
Pictures
Pins
Pitchers
Pocket books
Pounding boards
Puzzles
Reins for horses
Sand table
*Saws
*Scissors
*Shelves (open)
Soap bubble pipes
Splints
Stoves
Tables
*Tea table
Telephone
"Tootsie" toys
Tops
Toys on wheels
Trunks
"Twistum" toys
Vases
Victrola
Ultra-Violet Ray machine
*Washboards
*Wash tubs
*Water toys
Wooden skewers
Wooden toy animals
*Workbench and tools

3. Luncheon Equipment

(Items suggested by one nursery school)

Baskets	Dessert dishes	Salad forks
Bibs	Drop leaf tables	Sherbet cups
Bowls	Doilies	Tables
Chairs	Pitchers	Teaspoons
Containers for silver	Plates	Trays

* Items listed by five or more schools.

4. Sleeping Room Equipment

(Items suggested by one nursery school)

Blankets, cotton
Blankets, wool
Blankets, wool, for bed-pads
Chairs
Cots
Rugs
Screens
Sheeting
Sheets

5. Bathroom Equipment

(Items suggested by one nursery school)

Baby's bathtub
Basins
Bath mat
Bath towels
Chairs
Chambers
Clothes hamper
Drying rack
Foot stools
Hand towels
Lavatories
Mirror
Mops
Pails for mops
Screen
Soap containers
Toilets
Tooth brushes
Wash cloths
Waste basket

6. Book List

(List suggested by one nursery school)

Anderson, Anne, *Mother Goose*
Gabriel, Samuel, *Linnette Picture Book Series*
(1) *Four-Footed Animals*
(2) *Little Black Sambo*
(3) *The Airplane Book*
(4) *The Automobile Book*
(5) *The Boat Book*
(6) *The Circus Book*
(7) *The Little Red Hen*
(8) *The Railway Book*
(9) *The Three Little Kittens*
(10) *The Three Bears*
(11) *The Three Pigs*
Milne, A. A. *When We Were Very Young*
Winnie, the Pooh
Smith, Jessie Wilcox, *Mother Goose*
Wright, Blanche Fisher, *Mother Goose*

V. A List of Nursery Schools in the United States

Below are listed some of the nursery schools in the United States with the address of each and the information as to length of session. 'H' (half-day) indicates a morning session of about three hours without

the noon meal and afternoon nap; 'W' (whole-day) indicates a morning and afternoon session including the noon meal and afternoon nap.

This list is not inclusive of all groups of children of preschool age. Day nurseries and mothers' coöperative play groups where there is no trained nursery-school teacher in charge have been omitted. Since the list was completed September 1, 1928, new ventures and schools not well known at that time could not be included.

State	*City*	*Name of School*	*Half or Whole Day*
California	Berkeley	Children's Community	H
		University of California Institute of Child Welfare	W
	Hollywood	The Progressive School of Los Angeles*	H
	Los Angeles	University of California, Southern Branch	H
		Normandie Nursery School	W
		Public Schools	W
	Mills College	Mills College	H
	Oakland	Oakland Public School and University of California	W
	San Francisco	The Golden Gate Kindergarten Association	W
		Pacific Heights Nursery School	W
Connecticut	New Haven	The Cannon Nursery School	W
		Yale Psycho-Clinic, Yale University	H
District of Columbia	Washington	Washington Child Research Center	W
Georgia	Athens	University of Georgia	W
Illinois	Chicago	Chicago University Nursery School	W
		Franklin Public School Nursery	W
		Mary Crane Nursery School of Hull House	W
	Evanston	National Kindergarten and Elementary College	W
	Highland Park	Open Air Nursery School	W
	Winnetka	Winnetka Public School Nursery	W
Indiana	Indianapolis	Claire Ann Shover Nursery School, Butler University	W
	Lafayette	Purdue University, Home Economics Department	H
Iowa	Ames	Iowa State College of Agriculture and Mechanic Arts, Home Economics Division	W
	Cedar Falls	State Teachers College	W
	Iowa City	University of Iowa, Child Welfare Research Station	W
Kansas	Manhattan	Kansas State Agricultural College, Home Economics Department†	W
Louisiana	New Orleans	New Orleans Nursery School	H

* Beginning September, 1928, a limited number of children will remain until 3 p.m.

† The group of 4 to 5-year-olds stay only until 1:00 p.m.

State	City	Name of School	Half or Whole Day
Maryland	Baltimore	Johns Hopkins University	W
		Roland Park Country Day School	HW‡
	Chevy Chase	Chevy Chase Country Day School	H
Massachusetts	Boston	Associate Nursery School (Winsor Nursery School)	H
		Nursery Training School of Boston	W
		Play School for Habit Training, North Bennet Street Industrial School	H
	Cambridge	Cambridge Nursery School (2 schools)	H
	Northampton	Smith College Coöperative Nursery School	W
	Wellesley	Anne L. Page Memorial Nursery School (summer)	H
		Wellesley Nursery School on Wellesley Campus	H
Michigan	Ann Arbor	University of Michigan, Department of Education	W
	Battle Creek	Altrusa Nursery School	W
	Detroit	Detroit Teachers College Children's Clinic	H
		Merrill-Palmer School	W
		Neighborhood House of Detroit Industrial School Association	W
	Grand Rapids	Grand Rapids Public Nursery Schools	
		1. Harrison Park Jr. Kindergarten	H
		2. Kensington Nursery School	H
		3. Blodgett Home for Children	H
	Highland Park	Highland Park Public Nursery School	W
	Kalamazoo	Kalamazoo Private Nursery School	H
	Ypsilanti	Michigan State Normal School (Summer Nursery School)	W
Minnesota	Minneapolis	Institute of Child Welfare, University of Minnesota	W
		The Morning Nursery School	H
Missouri	Columbia	Stephens College	H
	Kansas City	Sunset Hill School	H
Nebraska	Lincoln	University of Nebraska, Home Management Department	H
New Hampshire	Peterborough	Peterborough Preschool Children's Center	H
New York	Binghamton	Nursery School and Kindergarten	H
	Croton	Greenery Nursery School of the Child Education Foundation (summer)	W
	Ithaca	Cornell University, College of Home Economics	W
	Mt. Vernon	Mt. Vernon Play School	H
	New York	The Bethlehem Nursery School	W
		Bureau of Educational Experiments	W

‡ Either half or whole day session.

State	City	Name of School	Half or Whole Day
		Bowling Green Nursery School, Bowling Green Neighborhood House	W
		Child Welfare Research Institute, Teachers College, Columbia University (2 schools)	W
		Greenwich House	W
		Judson Health Center	W
		Noyes School of Rhythm	H
		Walden Nursery School	H
	Poughkeepsie	Mildred Wimpfheimer Nursery School, Department of Euthenics Vassar College	W
	Rochester	Rochester Children's Nursery	W
	Syracuse	University Hill School	H
Ohio	Cincinnati	University of Cincinnati	H
	Cleveland	Cleveland Day Nursery and Free Kindergarten Association—	
		Gowan Nursery School§	W
		Samantha Hanna Nursery§	W
		Kiwanis Nursery School of Rainbow Hospital	W
	Columbus	Merryheart Nursery School	H**
		Ohio State University, Department of Home Economics	W
	Toledo	The Smead Nursery School	H
	Yellow Springs	Antioch College	W
Oklahoma	Stillwater	Oklahoma Agricultural and Mechanical College, School of Home Economics	H
Oregon	Corvallis	Oregon Agricultural College, Home Economics School	W
Pennsylvania	Flourtown	Carson College	H
	Loch Haven	Loch Haven Normal School, Preschool Psycho-Clinic	H
	Philadelphia	Neighborhood Center	W
Tennessee	Nashville	George Peabody College (Summer Quarter)	H
Texas	Austin	University of Texas	W
Wisconsin	Milwaukee	Milwaukee Normal School	W

VI. References on Nursery Schools

Those who wish to read more concerning the underlying philosophies of nursery schools as well as descriptions of methods and procedures will find valuable material in the following references:

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§ These nursery schools are affiliated with the Department of Nursery, Kindergarten, and Primary Education, Cleveland School of Education, Western Reserve University.

** A special group stays until 3:30 p.m.

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CHAPTER IX

THE KINDERGARTEN IN RELATION TO PRESCHOOL AND PARENTAL EDUCATION

SECTION A. CHANGING STANDARDS OF KINDERGARTEN THEORY AND PRACTICE

The problem of preschool and parental education cannot be discussed without reckoning very fully with the kindergarten. To be sure, it is possible to consider the issues chiefly in terms of the nursery school, but it would be unwise to ignore either the historic or the potential position of the kindergarten in the whole situation.

I. Early Development of the American Kindergarten

1. Froebel's Contribution

It is interesting and certainly most significant that Froebel's original idea was to train mothers to teach their own young children in the home rather than to organize schools and systems of teaching outside of the home.

2. Philanthropic Support

When the kindergarten was introduced into America, it persisted as a philanthropy long before it was accepted as an organic part of the educational system. During this period it was eagerly sought by missions, churches, and philanthropic organizations as the most hopeful form of social regeneration. We as a nation were gradually awakening to the new social problems due to enormous increases in foreign population. Our slums were in the process of formation. These became sources of disease, crime, delinquency, and industrial disorders, breeding centers of problems which we were nationally unprepared to meet.

The kindergarten appeared on the horizon at the right moment. Society turned to the young child as the one great hope, and kindergartens opened under religious and philanthropic influences all over America. These were often located in the worst slums of our cities, and were conducted by the finest type of America's young women who had prepared themselves in philanthropically supported normal schools. The period of training in these early

days was short and otherwise inadequate, but these young women entered upon the work with rare enthusiasm and consecration to the cause, receiving small salaries or none at all.

3. Social Welfare Program

Both kindergartners and heads of philanthropies soon saw the need of the ministrations of the physician, the nurse, the social worker, or the visiting teacher. But there was no money to pay for all this; so the kindergartener taught in the morning and spent her afternoons as a social welfare worker, seeking work for the unemployed, space in hospitals for ill mothers, searching for volunteer physicians to remove adenoids and tonsils or dentists to extract teeth.

The kindergarten teacher, by her friendliness and many manifestations of practical help not only for the children but for the fathers and mothers as well, gradually gained the confidence of the entire family and in time she was able to persuade the mothers, and sometimes the fathers, to come to the kindergarten for informal gatherings. The emphasis in these meetings was at first on getting acquainted and having a good time, but little by little the kindergartner was able through individual conversations and simple group discussion and demonstrations to teach these parents concrete facts about proper food for little children and how it should be cooked, the need for frequent bathing and care of the children's bodies—simple clean clothing, fresh air, and proper ventilation. This was the contribution of the pioneer kindergartner.

4. Entrance into the Public Schools

Philanthropy turned to the public schools asking them to include the kindergarten as a part of their organization. The opening wedge was made by gaining permission to use vacant rooms in public schools. The salaries of teachers and other running expenses were still defrayed by philanthropic agencies that were convinced of the educational as well as the philanthropic value of the kindergarten. The next step was to persuade boards of education to accept full responsibility. Thus in time the kindergarten became a part of many school systems.

5. Adjustment to Public-School Conditions

With this advent into the public-school system the kindergarten was confronted with a new problem—it must carry out its own aims and purposes and at the same time adjust itself to existing conditions. For many years it was a misfit; a great gap existed between the kindergarten and the remainder of the school. This was due in part to the fact that the kindergarten teacher was given a different type of training. Her philosophical background, her curriculum, materials, and methods, were too novel to be understood by teachers who had been trained to use a curriculum based upon the acquirement of the three R's. In the effort to bridge this gap many kindergartners laid undue emphasis on the formal preparation of the children for the first grade. The number of kindergartens in existence was quite inadequate to meet the public-school requirement of accepting all children who applied for admission. Consequently the classes were much too large and it became impossible to give children the amount of individual attention which they had received under earlier conditions. Another unfortunate result of this early public-school experience was that there was little or no opportunity to carry out the welfare work which was so significant a phase of the earlier movement.

The establishment of the kindergarten as a part of the public-school system in the United States has been gradual. Certain sections of the country have accepted this form of education for little children enthusiastically, while in other parts of the country progress has been slow.

II. Influence of Three American Educators

Up to this time the kindergarten had made slight modification in its philosophy, subject matter, or materials, but when in the period from 1890 to 1900 a great interest in child study and child psychology swept over the country, a few of the leaders in the kindergarten movement had the courage to break with traditional practice and seek scientific help from such men as Colonel Parker, Dr. G. Stanley Hall, and Dr. John Dewey, who were the leaders in this movement for more scientific study of children and who were testing their theories in experimental schools.

1. Continuity in School Education

Colonel Parker, then principal of Cook County Normal School, one of the earliest students of Froebel and the kindergarten, accepted many of Froebel's principles but rejected much of kindergarten practice which was to his critical mind a gross violation of Froebel's theories of creativeness and freedom. These principles Colonel Parker had accepted as the basis for his reconstruction of primary education, introducing drawing, painting, modeling, singing, dancing, and other activities as "modes of expression." As he utilized these in his methods of teaching in the lower grades, he was impressed with the formalism that still remained in the kindergarten as compared with the freedom and self-expression in his reconstructed school; consequently, he gave his loyal support and encouragement to any bold spirits in the kindergarten who had the courage to break with traditional practice and to apply Froebel's principles in better forms. Colonel Parker was one of the pioneers in freeing both the kindergarten and the elementary school from their enslaving influences on both children and teacher, and in so doing he was the first to unify the kindergarten and primary grade in one continuous educative process.

2. Health of Children

The new child study movement emphasized the differences between adults and children in thought, feeling, and conduct. Perhaps the most significant contribution of Dr. G. Stanley Hall in the child-study movement was in the field of health. He criticized the kindergarten for keeping children so much within doors, for bringing so many children together under conditions which multiplied the dangers of contagion, for encouraging children to handle the small materials which were then in use, and for requiring them to sit so long with so little real activity. In those early days Dr. Hall's vision of a "Paradise of Health" where children spent much time in active play outdoors, where materials for their use were large enough to prevent strain, and where the laws of hygiene were consciously and conscientiously observed was laughed at by many as asking for the impossible. But to-day we see the results of his teaching in numerous beautiful and sanitary school buildings and playgrounds, in the many children's clinics which are carrying out constructive and preventive health programs.

3. Curriculum and Method

Other great changes in kindergarten practice must be traced to the influence of Dr. John Dewey who came into the kindergartens to study practice and help in reconstruction. Dr. Dewey helped to reconstruct a new order out of the old with infinite patience in the study of details of the practice to be substituted. His pragmatic philosophy, embodying the best in the psychology and sociology of the day, called for a careful study of the child and a patient overhauling of every detail in curriculum and method. His emphasis upon interest in relation to effort, morality as involving choice, the principles of democracy in school organization, thinking as conditioned in problematic situations, when applied in kindergarten education necessarily led to a new curriculum and new methods of teaching and social organization. In many instances the kindergarten preceded the grades in its reconstruction of practice in the light of Dr. Dewey's principles. The so-called 'project method,' with its emphasis upon the child's right to plan for himself, as well as to execute the plans of the teacher, and upon the ability and the right of children to learn from and help each other, has given us the socialized school of to-day. No one has contributed such an impetus to the reconstruction of kindergarten practice as has Dr. Dewey, not only through his theories of life and education as a part of life, but also through his interest in, and coöperation with, those seriously attempting its reconstruction.

III. Changes in the Kindergarten

1. Two Points of View

In the light of this new psychology and of the child-study movement many kindergartens modified their practice, and courses in child study and hygiene were introduced into the training schools—the emphasis being laid on child development rather than on the development of subject matter as had formerly been the case. However, there were some within the kindergarten group who rejected the newer theories and practices and continued to use the unmodified Froebelian materials and methods. Thus, there developed two points of view in the kindergarten world—to a degree they still exist—those who continued to conduct the kindergarten

along Froebelian lines and those who modified theory and practice in the light of scientific discoveries in education.[1]

2. Emphasis on Child Needs

With this latter group the social organization of the kindergarten gradually became more informal, the program more flexible; discussion and informally organized play began to take the place of the "morning circle" and formal games; new materials, chosen to meet the needs of children more fully and healthfully, supplanted the Froebelian gifts and occupations; while new emphasis was placed on the child's physical and mental health. These changes came slowly; many mistakes were made, but gradually the adoption of a theory and practice embodying the more scientific views in education has produced the modern progressive kindergarten.

In the effort to develop in the kindergartens a more informal and natural organization experiments were carried on in various parts of the country.

3. Freedom for Activity

About 1912 the writings of Dr. Montessori were translated into English; the work she was doing with little children in Italy became widely advertised, and her influence was distinctly felt by the kindergarten in America. While we may criticize her faulty psychology and her choice and use of materials, her "Doctrine of Freedom" unquestionably gave further impetus to the experiments in freer social organization already under way here. To-day in a modern progressive kindergarten children have every opportunity for physical development; provision is made for a hygienic environment with plenty of space, sunshine, and air; they are free to move about and use materials which encourage many types of activity; and the provision made for intellectual growth takes due consideration of individual differences.

4. Social Organization

In the modern progressive kindergarten an effort is made to give the children a well-balanced emotional life. As far as possible,

[1] The willingness with which kindergarten leaders have laid their work upon the table for examination and have altered it continually in the light of modern developments of psychology has been one of the outstanding characteristics of the movement.

children are allowed and encouraged to carry out their own aims and purposes. However, wherever a number of persons live together there must be some form of organization which will help individuals to adjust to each other for the good of the whole. As far as possible, this organization should be carried on by the children themselves, but situations will arise which will need group consideration and cannot be left to any one individual child. As far as the children themselves can settle their group questions, the responsibility should be left to them; but where the problem is too complex and difficult, the teacher must be ready to assist in its adjustment. Her place should be that of one of the members of the group.

"For the child of this age moral training is largely social adaptation. The teacher should be conscious of the opportunities for such training and of the necessity for the formation of habits and attitudes such as obedience, consideration for others, respect and reverence."[2]

IV. Activities of a Typical Day in a Modern Kindergarten

In the modern kindergarten there is *no generally accepted* program for the day's activities. The following description, however, will give a picture of one kindergarten which is typical of many in the United States.

1. Arrival at Kindergarten

The activities of the day start with the arrival of the first child. There is no time wasted waiting for all to gather for a formal opening, but there is the more informal and natural individual greeting between the children and the teacher. With this morning greeting the teacher has the opportunity to talk to each child about anything that may be of personal interest and at the same time to see that he is in good physical condition before he comes in contact with the other children. If she detects signs of a cold or other physical difficulty, the child is sent to the school doctor, who examines him and if necessary sends him home with proper instructions for further treatment. When the child returns to school after an illness, he is readmitted only after the school doctor has seen him and pronounced him in condition to be with other children. This early detection of sickness (including colds) and immediate exclusion from the group does much to prevent epidemics.

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[2] Hill, Patty Smith. *A Conduct Curriculum for the Kindergarten and First Grade.* New York: Scribner's, 1923, p. 10.

Small individual lockers are provided for each child, in which he keeps his own paintbox, crayons, smock, shoes, unfinished work, or any of the little belongings which he so enjoys bringing to school.

After the children have said "good morning," they go to their lockers and put on their soft gymnasium shoes. Learning to lace and tie their shoes is often a big undertaking for children who have never been taught to do things for themselves, but before long they are taking pride in being able to quickly change their own shoes without help and will even be giving help to other children who are still struggling with the problem.

2. Work Period

a. Materials. As the kindergarten is essentially a children's playroom and work shop, the materials are attractively placed within easy reach. One corner of the room may be occupied by a family of dolls, with the necessary furniture, dishes, carriage, and so forth. The library will be in another corner where the light is especially good. Here will be a low bookcase holding a variety of the best books for children of this age, with a special library table and a few attractive little willow or reed easy chairs. Two or three pieces of apparatus especially designed for physical exercise, such as a junglegym, a swing, and a seesaw, are in different parts of the room. Also included in the equipment will be a sand box and sand toys, a carpenter's bench and tools, a box of large building blocks of suggestive sizes and shapes, nature material and other materials for scientific experimentations, and on low bulletin boards attractive pictures of a variety of subjects. In low cupboards (on shelves so spaced that things need not be piled on each other) will be found materials for industrial and fine arts, the smaller playthings, such as tiles and puzzles and housekeeping materials, a small tub and washboard, electric iron, and utensils for simple cooking. A small broom and dustpan and mop will be found hanging in an inconspicuous but accessible place, to be used whenever there is a need for them.

b. Individual and Group Activities. The children are encouraged to think for themselves and to select the playthings and materials which they wish to use—some of the materials have been put in the room with the idea of stimulating group activities, while others are provided for individual use and experimentation. Early in the school year the activities tend to be more individual and the few spontaneous group activities that do arise are of short duration. As the year progresses and the children develop in ability to plan and work together, groups are more frequently formed and hold together for a longer period. Occasionally throughout the year all the children coöperate in carrying out a plan.

c. Variety in Activities. The well-equipped room suggests a variety of activities to children. While some may be exercising on the apparatus, others will be at the tables painting, sewing, modeling with clay or perhaps drawing; someone may be painting at the easel; others will

be building with blocks, playing with the dolls, or working at the carpenter bench, and still others looking at picture books at the library table. The amount of time that each child spends in the use of any one material or the amount of time in which he plays alone or in a group must be worked out by the child with the help of the teacher; this adjustment must be individual, for no two children have the same abilities and needs. Little by little, the responsibility of consciously working out their own time schedules is assumed by the children themselves.

d. The Teacher's Part. During the work period the teacher, having provided suggestive material for the children's use, goes about giving suggestions when needed, helping some child to learn to do a piece of work in a better way, proffering constructive criticism, and helping the children themselves to criticize constructively. She also suggests a piece of work if a child cannot think of a worthwhile activity for himself, sees that each one has a variety of experiences with materials and does not concentrate on one material beyond the point of progession, so that all of the children have opportunity for use of all materials, the standard of work is gradually raised, and the children develop increasing knowledge and skills and better habits and attitudes.

The children must be taught how to use materials and tools safely and without waste and how to put them away in an orderly manner when work time is over. At the end of the self-initiated work time (about 9:45) the signal is given for putting away all materials in their proper places and gathering in groups for a story. The same signal, whenever given, requires immediate and perfect attention on the part of the children, so that the teacher can get the attention of the entire group instantly at any time.

3. Stories

The story period, usually fifteen or twenty minutes, is used for telling or reading stories, whether new or old. Children enjoy telling stories themselves and after a little help and encouragement will make up their own.

4. Mid-morning Lunch

After the story period the children go out to the dressing room where they are taught to take care of themselves on the toilet, to wash and dry their hands. They return to the kindergarten room where they set the table for luncheon. Milk and graham crackers, or orange juice, an apple or small sandwich, brought from home or sent up from the school lunch room, is the usual menu. This luncheon period is not only a valuable time in which to improve eating habits and attitudes and gain knowledge of food values, but it gives an opportunity as well for informal conversation in a comparatively small group. Interesting discussions take place about the weather, excursions, experiences that the children have at school or home, nature, current events, holidays, and many other

topics. Children learn to present interesting things to be talked about at this time.

5. Rest

After luncheon the children spread their individual rugs on the floor and lie quietly for about fifteen minutes in a darkened room. Each rug is marked at the top with the child's name and so folded that he can always know at which end to put his head. He is taught so to refold the rug as to keep the side he rests on folded in and away from the floor. Learning to rest is not easy. It takes time to learn to lie quietly and to relax, but the children take pride in gaining control and are better for the perfect quiet of these few minutes.

6. Music and Rhythm

At the end of the rest time (about 11 o'clock) the rugs are put away and the children place their chairs in an informal group near the piano for music. If the group is large it may be well to place the chairs in rows for the greater convenience of getting in and out. About thirty minutes is used for singing, individually or in groups, affording an opportunity to develop rhythm informally from the children's own interpretations of the music, and for the use of the band instruments. Other musical experiences include listening to Victrola records, to someone playing the violin, or to someone who comes to sing their favorite songs to them.

As far as possible, early in the year the children should be given a simple music test so that the teacher will be able to know their various abilities and give them individual help.

7. Outdoor Play

The last half hour of the morning is commonly used for outdoor play. This play may be very active—running, jumping, climbing, or it may be dramatic—playing house, train, boat, store. As the year progresses, the children may enjoy simple organized group games, such as ball games, spin the ring, or a dancing game in which all can participate, such as *Little Sally Waters*. Short excursions to interesting places within the school or the immediate environment may be taken this last period. Occasionally, longer trips are made to the museum, greenhouses, 'zoo,' etc.

The "Good-bye" is as informal as the greeting. The children are taught to get their own wraps and put them on, even to struggling with refractory buttons and trying leggings.

V. Principles Underlying the Modern Kindergarten Program

There is no prescribed program in the kindergarten, but as far as possible the children are given information through experiences and demonstrations. These experiences are supplemented and

deepened by carefully selected pictures, models, and stories. The experiences most interesting and vital to little children have to do with social relationships of family and neighborhood and often reach out into the larger world of other races and peoples. The celebration of holidays, the weather, the typical manifestations of the seasons, plant, and animal life, where things come from, how they are made, how we travel, and how we live are among the most vital of the children's interests.

In this informal organization the children are given opportunity to plan their own work, sometimes working alone and sometimes organizing a group to carry out some large purpose. They are helped to criticize and judge their own activities and to plan and carry on a simple social organization of their own.

The outcomes of the children's experiences are in terms of character development, the building of good habits and attitudes, and the acquiring of useful knowledge. Records of progress, in terms of character and social development, are kept of the individual children and also records of experiences, in terms of subject matter, for both the individual and the group.

Children are promoted to the first grade in the most progressive systems on the basis of general development and social maturity rather than on the basis of chronological age. Social maturity implies the ability to purpose, plan, and work together in a group; to take and use directions and criticisms; and to make intellectual contributions.

VI. Parent and Teacher Coöperation

1. Reports and Records

a. Daily Report. In order more intelligently to guide and direct the children in the kindergarten, it is necessary to know as much as possible about each one. It is helpful to have a daily report brought from home by each child. This report includes a statement of the number of hours of sleep the child has had, whether the sleep was sound or disturbed, food difficulties, bowel movement, emotional disturbances, amount of outdoor play, as well as any abnormal condition that might affect the child's behavior. This report helps the teacher in dealing with the everyday problems that arise and in bringing about a closer coöperation between the school and the home.

b. Health Records. Each child is given a thorough physical examination once a year, when the mother is invited to be present. Any suggestions which the doctor may have for treatment or correction are given at this time. The mother is asked to fill out a form giving information about the child's past health; this form is filed in the doctor's office for reference. Besides this general examination once a year, the child's weight and height are recorded once a month, and a report is sent to his parents if any unusual or significant symptom is discovered.

c. Developmental Records. A record of the child's development which can be kept by both parents and teacher and compared from time to time is most helpful in bringing about in the child a more harmonious development. The record may include such topics as personal hygiene, obedience, responsibility, orderly habits, ability to take and use criticism, consideration for others, coöperation with others, leadership, ability to plan work, ability to carry work to end, ability to make intellectual contributions, mental alertness, motor control, and emotion stability.

2. Visits, Conferences, Meetings

Children often have a different set of habits for home than for school; in fact, sometimes the whole nature of the child seems to change from one environment to the other. A child who is happy and enthusiastic at home is sometimes unhappy and diffident at school, and a child who is obedient at school may be disobedient at home. In order that parents and teacher may have a common basis of understanding and sympathy in dealing with children, frequent meetings, both individual and group, are necessary. Parents are urged to visit the kindergarten often, so that they may know from personal observation what their children are doing and have a better understanding of the work of the kindergarten.

Parents' meetings are held from time to time for the discussion of practical problems of child development; at other times lectures are given by specialists on such vital subjects as proper feeding, habit-formation, etc.

A visit of the teacher to the home will often throw light on some perplexing problem. After such a visit a shy child may often he helped to overcome his shyness; or the visit may in other ways establish bonds between the home and the school.

VII. Relation of the Kindergarten to Nursery School and Elementary Grades

While the kindergarten for many years stood apart from other educational institutions and had a unique development, it has now become an integral part of the educational system. It was the recognition on the part of certain kindergarten leaders of the importance of consciously assuming responsibility for the training of young children, even before the kindergarten period, that led to one phase of the movement for the development of nursery schools in this country. These same leaders in education also recognized the importance of a continuous development beyond the kindergarten and the primary grades. There is now a growing tendency to look upon the nursery school, kindergarten, and first school grades as a unit in the educational system.[3]

1. Contribution of Kindergarten Education to Nursery Schools

In America nursery schools have largely affiliated with progressive kindergartens. The social organization of these nursery schools, therefore, is in keeping with the free social organization of progressive kindergartens where formal games and 'morning circles' have long been given up. They have accepted many of the principles of the kindergarten, but have modified its organization and materials for their own needs. Those few nursery schools which have been influenced by the conservative kindergarten have taken over its more formal aspects, such as the morning circle and organized games.

2. Influence of the Nursery School

On the other hand, the nursery-school movement is influencing kindergarten theory and practice especially in the direction of more scientific study of the nature of the child. The kindergarten teacher is also learning from the nursery-school teacher that, in order properly to guide the activities of children while they are under her care, she must know much more about their lives outside

[3] The figures from the Bureau of Education for 1927-28 are as follows: Of the supervisors in 108 cities, 45 supervise from kindergarten through 3rd or 4th grade and 48 supervise from kindergarten through 6th, 7th, or 8th grades. Of 126 teacher-training institutions giving kindergarten training, 98 have combined the training for kindergarten with the first three grades; 5 combine nursery school, kindergarten, and primary training.

of the school. Efforts are being made to bring about closer cooperation between the home and school so that each will know the child's whole twenty-four hour day.

The relationship between the nursery school, kindergarten, and first grade is rapidly growing closer. Teachers of young children in many institutions are required to have training and practice in all three fields. As they move from one group to another, they recognize the contributions, requirements, and possible development of each level of maturity, and this interchanging helps greatly to bring about a closer unity.

3. Interaction Between the Kindergarten and Elementary Grades

Just as the nursery school and kindergarten interact and contribute to the educational development of each other, so do the kindergarten and primary grades. Teachers going on to the primary grades have felt the need of richer and more vital subject matter that is more closely related to the child's life—a subject matter which must come through experience rather than books. A great variety of interesting materials is finding its way into the school room, and a more informal and natural type of organization is taking the place of more formal methods.

A modern progressive primary-grade room does not look unlike a kindergarten room. In it will be found movable chairs and tables, low cupboards, individual lockers, and the same stimulating and suggestive materials as are found in the kindergarten, besides others which are added to meet the needs of children at this level of development. The same informal organization is carried on, with the children gradually assuming more and more responsibility for the conduct of the room. Children are given opportunity to carry out their own aims and purposes and to judge their results. They show increasing skill in handling tools and materials and more independence in carrying things to a finish. As in the kindergarten, the children move about freely, working individually or in small self-organized groups, but there are more occasions when the whole group coöperates in working out a common plan. The subject matter of the first grade is related to, and grows out of, the activities. Children learn to write because they have a need for this form of expression; they learn to count and measure because

these skills are necessary in carrying out their purposes. An interest in reading is a natural outgrowth of their rich background of experiences. In fact, the beginnings of all school subjects are found in the activities of the kindergarten, first and second grade, and it is the function of the teacher to organize and direct these activities so that learning takes place. While acquiring information and developing skills are not overlooked, the emphasis is on social living and the development of character.

The closer interaction between the kindergarten and primary grades has brought to the kindergarten a consciousness of the need of interpreting activities in terms of progressive child development. The subject matter of the school is embodied in the experiences of the children, and it is through these experiences and the wise direction and organization of activities that learning results and the child is educated.

SECTION B. THE ADMINISTRATIVE SIGNIFICANCE OF THE KINDERGARTEN

I. Introductory Statement

The kindergarten is now a recognized part of the typical public-school system of America.[4] It became a tax-supported feature of a school system in St. Louis as early as 1870. For many years, the kindergarten maintained a marginal position outside the public-school system which was very similar to that of the nursery school to-day. As has been stated, in its early pioneer days the kindergarten frequently engaged in educational activities similar to those of the modern nursery school. It provided for children of nursery-school age and developed genuine working contacts with their parents. Even to-day the kindergarten occupies the field of preschool education, if the age of six to seven is regarded as elementary-school entrance age.

In California, for example, it is anticipated that the kindergarten may in time become an almost universal and compulsory part of the public-school system, and that the nursery school may then be placed on a mandatory-on-petition basis. In England, the

[4] The Bureau of Education gives the following figures for 1924-26: 91 percent of cities of 100,000 and more population, 69 percent of cities of 30,000 to 100,000 population, 40 percent of cities of 10,000 to 30,000, and 32 percent of cities of 2,500 to 10,000 population maintain kindergartens. See *City School Circular No. 3.* Bureau of Education, U. S. Department of the Interior, Washington, D. C., March, 1928.

nursery school is on a permissive basis, but is given official parliamentary recognition in the Education Act of 1918. There the nursery school may be regarded in principle as part of the system of public education.

The cleavage between the nursery school and the infant school in England has not manifested itself in the kindergarten situation in America. Indeed, through their official organization, the International Kindergarten Union, the kindergartners have expressed an alert, constructive attitude toward the nursery-school movement, and this attitude should be counted as an asset by all school administrators who may plan to incorporate the prekindergarten child into the scheme of public education. So far as the kindergarten is part and parcel of this scheme, it may be said that the principle of preschool education has already established itself in this country. The broad administrative problem now has to deal, not with the establishment of the principle so much as with its application and extension.

During the past ten years, moreover, enrollments in public-school kindergartens have rapidly increased while those in private kindergartens have decreased. This may be explained in part by the fact that many kindergartens organized and originally supported by philanthropic institutions have been taken over by the public-school system. Such a change from private to public control of kindergartens is normal, provided there is no lowering of standards in the change. Private funds are frequently spent to show the need for an educational movement and to demonstrate its value.

Philanthropic organizations were the first to champion the kindergarten, to show the educational and social need for it, as well as to demonstrate the possible contribution it could make to general education. This type of private organization substitutes for the public school until popular opinion permits the use of public money for the support of the project. The nursery school of to-day is in much the same sociological position as the kindergarten of two generations ago.

In what direction should public educational activity in the preschool field be extended? And to what degree should the kindergarten itself be used as the means of accomplishing the extension? And if a distinction is to be made between the kindergarten and nursery school, to what extent should the kindergarten have pri-

ority of claim in the development of public tax-supported preschool education? These questions are not invidious if they are framed in order to clarify the issues.

II. Comparative Summary Statement of the Kindergarten and Nursery-School Situation

1. Enrollment

A brief summary comparison of the existing provisions for kindergarten and nursery-school education will serve to bring into perspective the broader organizational aspects of a large and complicated administrative problem. In 1922 there were 8889 kindergartens with 11,842 teachers and 555,830 pupils. These figures were for communities with a population of over 2500.

Most of the kindergarten enrollment for the country as a whole are still found in cities of 2500 population and more—584,235 children were reported by 853 cities in 1926. This number is approximately 27 percent of the estimated total number of four- and five-year-old children reported by the Census of 1920 as living in cities. It is estimated that less than half—44.45 percent—of these live in the cities. Geographical distances in rural sections of the country may make it difficult to provide kindergarten education for the other 55 percent of the young children living there. It should be stated, however, that the increase in the number of consolidated schools and the recognition of the neighborhood as the primary social unit in rural districts is leading to a definite increase in kindergarten provisions in these districts. These kindergarten arrangements promise to have considerable future importance in the development of preschool and parental education in the more sparsely settled communities.

In 1927 the number of nursery schools in the country approximated 75, with a total estimated enrollment of 1000 children. The total number of children enrolled in public-school kindergartens of the United States was 700 times greater, or 700,000.

2. Costs

The total cost of public kindergartens in New York State (in 1921) ranged from $21.00 to $113.00 per pupil. However, costs of kindergarten education can be segregated only for instruction,

since all overhead expenses are generally shared with the elementary grades of the public-school systems throughout the country. Instruction for a kindergarten pupil in average daily attendance is lower than that for elementary-grade children, owing largely to the fact that two groups of pupils (one in the morning and one in the afternoon) are often assigned to one teacher. The per capita cost for instruction in twenty nursery schools surveyed by the Bureau of Education ranged from $90 to $725 per child in average daily attendance, depending upon the emphasis of experimentation and research. These high costs are to be attributed to the fact that the enrollment in the nursery schools is relatively small, and that much of the work is at present on an experimental and research basis.

In discussing costs of nursery-school education two factors must be taken into consideration: first, the purpose for which the school is organized—the cost of equipment and salaries for a nursery school in a Research Center greatly exceeds that for a school organized to carry a regular program; second, the numbers of persons profiting by the work of the nursery school among whom the costs could properly be distributed instead of allocating them entirely to the children enrolled—such persons include the children, their parents, research workers, and students observing or participating in the work as part of their training.

3. Age Range

From a sampling of the ages of 4448 children attending 137 kindergartens, the range of ages for the entire group was found to be two years to seven years and two months. The widest range in a single school was from two to six years. The smallest range in a single school was five years and eleven months to six years and four months. The median low age for the 137 schools was four years and seven months and the median high age for these same schools was six years. It is evident that the two years' range from four to six seems to express the average age range in most kindergartens. Five years is the most characteristic kindergarten age.

The ages of children attending nursery schools range from one to five and a half years; the interval of greatest frequency is three to three and a half years. There is a tendency to enroll children over three years rather than under. There is, then, a definite over-

lap in the age ranges of children reached by both kindergarten and nursery school.

III. Kindergarten Activities in the Field of Preschool and Parental Education

It is possible to define a *nursery school* in such a way that it excludes what we ordinarily mean by the term *kindergarten*. Likewise it is possible to set up such a definition of a kindergarten (of the prevailing public-school type) as to exclude from it the current conception of a nursery school. On the other hand, it is possible to maintain that the kindergarten as well as the nursery school is still in a formative stage of development, and that their two spheres overlap to such a degree that certain common factors should be discovered.

The history of the early kindergarten movement shows that in the pioneer days the kindergarten was less sharply delimited at the four- and five-year levels, but frequently made room for children two and three years of age. Home visiting, parental conferences, and even health work, were frequently a part of its program. The free kindergartens, because of their social setting, often combined day nursery and educational work. Boston, for a period, made home visitation a regular duty of its kindergartners. Washington, D. C., established a nursery type of kindergarten in a congested district which bore considerable resemblance to a present-day nursery school. Los Angeles, by an act of the Board of Education, actually took over sixteen day-nurseries and incorporated them into its school systems. It was argued that, without this arrangement, some children of school age could not attend school, but would have to remain at home to take care of their younger brothers and sisters, as their mothers were gainfully employed. The committee does not suggest that this is a desirable method for the extension of public education into prekindergarten levels.

Only recently Detroit had to meet a similar situation. Unemployment of fathers placed a premium on employment of mothers to make up family income. This brought pressure on certain public schools to accept children of prekindergarten age who were brought to school by children of school age. Because this was an emergency, the public schools managed to make special supplementary arrangements for these preschool children. While some cities have drawn

the age limit of kindergarten entrance sharply at five years, others have lowered it to four years,[5] and still others, like the kindergarten of the southern branch of the University of California, have definitely made provision for three-year-old and two-year-old children.[6]

Consolidated rural school kindergartens likewise find it natural to make contacts with children of prekindergarten age and with their parents. The community unit idea prepares the way for the establishment of high-schools, for intimate community participation in the affairs of the school, and for the development of home-making education and of school contacts with parents and children of preschool age.

Whenever a school organization becomes highly socialized (in the neighborhood sense), it tends toward adult and continuation forms of education. It tends also to relax the conventional concepts of schoolroom, school age, and school privileges. All these social tendencies, reinforced by changes in home life, economic life, and the status of woman, give a new meaning to the related problems of preschool and parental education.

The necessity of highly diversified facilities and flexible arrangements at the graduating end of the public-school system is now widely recognized. A similar flexibility at the receiving end of the public-school system will demand a readjustment and reconstruction of the kindergarten, permitting the incorporation of certain types of work now represented by pioneering nursery schools.

IV. The Administrative Situation

1. Legal Status

From the standpoint of existing conditions, the kindergarten enrollment evidently far outnumbers that of the nursery school. Although eight out of every nine children from four to six years of age do not attend a kindergarten, the number of pupils enrolled in kindergartens is probably from 700 to 1000 times greater than the number enrolled in nursery schools. The legal status of the

[5] In Wisconsin, Maine, Utah, and New Jersey, the four-year-old is educated by law; in Michigan, the three-year-old is being taken into kindergartens or nursery schools in both teacher-training schools and public schools. See *Kindergarten Legislation*. Bureau of Education, U. S. Department of the Interior, Washington, D. C., 1927. Bulletin No. 7.

[6] This is now called a nursery school.

kindergarten, moreover, is relatively well established. Only four states have no laws permitting the establishment of kindergartens. All other states, by specific statutes or by fixing no minimal school-entrance age provide for the establishment of kindergartens. In seven states and several cities there is a mandatory aspect to these legislative provisions. The nursery school is properly still an innovation which only in a few scattered instances has become an integral part of a public-school system.

2. The Kindergarten a Part of the School System

Indications that kindergartens are steadily gaining recognition as part of the school system include the following:

1. The rules and regulations of Boards of Education in many city school systems describe their school organization as, "kindergarten, elementary, secondary, and special," and the Department of Superintendence states that "the elementary school comprises the kindergarten and grades 1-6, the kindergarten being recognized as the introductory section of the elementary unit."

2. Thirty states issue kindergarten or kindergarten-primary certificates for teaching; others state or imply that general elementary or special subject certificates may cover kindergarten teaching.

3. The curricula of approximately two-thirds of the public and private normal schools and teachers' colleges provide preparation for kindergarten teachers.

3. Unification of Nursery-Kindergarten-Primary Education in Teacher Training[7]

The kindergarten is becoming increasingly unified with the primary grades, and this tendency is solidifying its position in the public-school system.

This tendency is also reflected by new tendencies in the organization of teacher training. According to reports received in the fall of 1927, 172 teacher-training institutions[8] provide training for

[7] The figures for this section were obtained from Davis, M. D., and Hemingway, R., "Descriptive Directory of Institutions Offering Training for Teachers of Nursery Schools, Kindergartens and Primary Grades." Bureau of Education. Unpublished manuscript.

[8] These include teachers colleges, normal schools, and departments of education in universities and liberal arts colleges.

kindergarten teachers. One hundred fifty-two of these offer a unified course for the preparation of teachers for kindergarten-primary grades; six of these include the nursery school with the kindergarten-primary unit.

But seven of the 172 institutions reporting offer training for kindergarten teachers only; 23 other institutions offer segregated kindergarten curricula, but they also offer either unified kindergarten-primary, separate primary, or general elementary curricula.

From reports of the length of curricula offered in the 172 teacher-training institutions, all but 48 offer curricula requiring more than 2 years for completion; 34 schools offer a maximum of three years, and 95 offer a B.S. or A.B. degree after four years of study. Fourteen of these 95 institutions offer graduate work in the preparation of nursery school, kindergarten or primary grade teachers.

In planning the program for the training of teachers for the kindergarten-primary grade unit, 130 of 140 institutions report that the theory and method courses are identical for students in this department, while 118 divide the students' time for observation and practice teaching among the kindergarten-primary grades. Among 141 institutions reporting the combined kindergarten-primary curricula, 63 offer theoretical courses in preschool education, and 48 provide observation or practice teaching with children of prekindergarten age for the students preparing to be kindergarten-primary teachers.

Thus, segregation of the training course for kindergarten teachers is rapidly disappearing and the whole educational program for young children is becoming a decided unit. This is evident not only in the teacher-training courses and in the certification of teachers but likewise in the supervision provided for these grades in public school systems; in 75 percent of the cities reporting, supervision of the kindergarten and of the primary or elementary grades is combined.

In the past the major administrative questions regarding the kindergarten concerned its adjustment to the primary school. At present this question has been overshadowed by the problem: What should the kindergarten do about younger children of nursery-school age? Is it possible that the present-day kindergarten will crystalize into a primary schoolroom and that the future

will necessitate an ironically similar readjustment between the kindergarten and other preschool agencies?

4. Adjustment to Problems of Child Welfare

The fate of the kindergarten in American education seems to hang upon the manner in which it will address itself to the larger problems of child welfare which concern at once questions of public health and of educational and social policy. We are in the midst of a steady social evolution so far as the status of the preschool child is concerned. He will attract to himself increasingly new forms of educational endeavor and social control.

Modern scientific thought and the whole trend of preventive medicine literally force us to take a revised conception of education, and particularly a revised conception of the developmental significance of the preschool years. In some form or other these years are coming under increasingly great social control. That much can be predicted with safety.

But how this control will be accomplished cannot be predicted. That the kindergarten or its equivalent will play a considerable rôle in the associated fields of preschool and parental education can hardly be doubted, because the kindergarten is strategically located at the very growing edge of the public-school system.

5. Strategic Position of the Kindergarten

The strategic significance of the kindergarten as an educational instrument rests upon the following facts:

1. The kindergarten has a frontier position in the educational organization.

2. It is naturally the recruiting and receiving division of this organization and therefore has many functions in the hygienic regulation of school entrance.

3. The kindergarten is in a position to develop close contacts with homes through parent conference and home visitation, to say nothing of systematic parent education.

4. The kindergarten is a most natural resource for the development of demonstrational and participating arrangements in the field of preparental education.

5. The kindergarten has an important function in the field of parent guidance and individual child guidance in relation to many types of handicap and minor behavior defects in early childhood.

6. The kindergarten lies in closest proximity to the public and quasi-public agencies which are concerned with the protection and supervision of the early physical development of infants and young children.

V. The Need of Experimental Reconstruction of the Kindergarten

1. Need for Experimental Attitude

The problem of school administration, therefore, is not the multiplication of nursery schools as such, nor even the multiplication of kindergartens as such, but the readjustment and extension of present educational and hygienic control of early child development in relation to home and parent.

It follows that for the administrative solution of the problems indicated there is demanded cumulative experiments and demonstration. The nursery school itself should be regarded as an experimental means of determining methods, techniques, and economic possibilities. It is suggested, however, even more strongly, that in the meantime the kindergarten should also be deliberately utilized as an experimental station in a similar manner.

The kindergarten has been singularly free from experimental study. School board and superintendent have been ready to supply material equipment, but have then been inclined to grant the kindergarten a somewhat detached freedom. Since, however, the kindergarten is really the recruiting station of the elementary school, it ought to be the most active and fertile field of experimental education, in the administrative sense as much as in the pedagogical. Nearly all the prevailing kindergarten practices follow the same pattern with regard to age, personnel, equipment, and program. The kindergarten consequently is in danger of crystalizing into just another schoolroom, when to meet the new demands it should develop a versatile, multiple technique that will bring it into more effective contact with a wider range of childhood.

If we go on the assumption that the kindergarten is a place for five-year-olds, and that they attend on a full-time basis daily, like

any other school children, we prejudice the solution of the problem. If, however, we regard the kindergarten as the vestibule of the public-school system, as a controllable port of entry, and give it freedom to develop varying, multiple contacts with different age levels and with parents, it may be possible to overcome the institutional delimitations toward which the kindergarten pattern is now tending. An experimental attitude toward the kindergarten seems to be an outstanding need in the present situation.

2. Suggestions for Experimentation

The specific directions in which progressive experimentation should be undertaken may be characterized as follows:

1. Periodic and part-time attendance for four-, three-, and two-year-old children. It should not be taken for granted that full-time daily attendance on the ordinary elementary-school basis is the only available procedure for the organization of preschool education. For educational reasons, to say nothing of economy, it should be profitable to define graduated and differentiated attendance arrangements which may enable the kindergarten (or its equivalent) to make contacts with a wide range of age groups and establish anticipatory relations with parents of young children before the latter reach the age of five years.

2. Extension of parent conference and parent training provisions so that an increasing amount of educational work will be accomplished in the homes prior to the kindergarten and primary-school age.

3. Correlation of home economic courses in child care with kindergarten procedures developing provisions for participation, demonstration, and observation.

4. Individualized child guidance work for children from two to five years of age who are in special need of mental hygiene measures, and whose parents require special guidance. This work may be accomplished by closer association with child health agencies, medical school inspection, visiting teachers, etc. It is essential that means should be found for discovering and helping certain handicapped children before they reach school age. The technique for this work is concretely outlined by the methods of the habit clinic, the child guidance clinic, and the guidance type of nursery.

5. The gradual incorporation of selected features of nursery school practice.

6. The shifting of educational approach to the whole family rather than to the individual child, and the development of the community unit and neighborhood idea, both in rural and in urban districts.

7. A fundamental revision in the training of kindergarten and primary teachers which will give the ideas and methods that will embrace the new social implications of all work with young children and will incorporate some of the better features of training for nursery-school workers.

VI. General Outlook

There is, of course, no short-cut solution to the complicated problem of preschool education in its relation to parental and preparental education. The solution must be progressive and will naturally vary with local, social, and economic conditions.

But the general problem is well enough defined and sufficiently concrete to merit the attention of administrative leaders as one of the most outstanding of all the present major problems of educational policy. The problem cannot be escaped by any process of rigid delimitation of school functions. It is extremely improbable that the kindergarten will either be abandoned or confined within its existing limitations.

It would be regrettable if the needs of preschool education were met by purely supplementary facilities or by the mere addition of sub-kindergarten arrangements similar to those already in existence. It is a grave question whether we should add to our public school structure, after the sectional bookcase manner, simply another tier of arrangements for four-year-olds and three-year-olds and two-year-olds. Something radical should be done to overcome the present tendency toward segregational stratification. The whole field of preschool education in relation to home and school calls for a more flexible and diversified approach, such as that represented in the best medical and public health work.

The older concepts of school entrance, and ultimately even of legal school age, must give way to something less rigid. Public school activities must become closely articulated with other forms of social control which are taking shape in various fields of infant

welfare and mental hygiene. The social demands, to say nothing of the social complexity of the problems of preschool and parental education, will increase rather than diminish with time. The intricacy of the problems places a premium on progressive experimentation. The urgency of the demands will challenge inventive, social imagination. The kindergarten, with the stimulus of the nursery-school movement, has become a natural and a promising experimental ground for the determination of new educational policies under public auspices.

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CHAPTER X

SURVEY OF PROGRAMS IN PARENTAL EDUCATION

I. Introduction

a. Brief Account of the Development of the Movement. Parental education has a twofold meaning: it is a conscious effort on the part of parents to gain an understanding attitude toward their children as developing personalities; also, it is a conscious attempt on the part of organizations and agencies that serve children to interest the parent in the newer knowledge of child life, for the benefit of the child in the home as well as in the school and the community.

The realization of the need for the education of parents to a better understanding of their children did not develop from the impetus given by one of these interests only, but came almost simultaneously from both the home and the community interests. Parents began to realize that the traditional methods of rearing children were not proving adequate for the complicated economic and social conditions of to-day, that being a physical parent did not necessarily endow one with special ability or fitness to understand and rear children. In consequence, parents began to study the procedures which they were using with their children and to reach out to professional groups for assistance. They turned to educators, religious workers, referees of juvenile courts, and scientists from every branch of knowledge for information in regard to the problems of child development. Thus we have parents in search of education.[1]

Two of the early organizations which grew out of this desire of parents were the Federation for Child Study, which became the Child Study Association of America, and the National Congress of Mothers, later reorganized as the National Congress of Parents and Teachers.

As the professional groups in the various branches of science came to see the child as a unit and as a developing personality, they

[1] A complete discussion of this topic is given in Chapter IX of Dr. Miriam Van Waters' recent book, *Parents on Probation*, New Republic. 1927.

soon realized the importance of the home as a factor in his development and training. They, too, saw the need for a continuity of interest in regard to the procedures of child training in the home, school, and community. Thus we have attempts of educational, civic, and religious groups, extension departments of colleges, public school systems, health centers and others to organize materials, to give courses, and to provide leaders for groups of parents. There was a conscious effort to interest parents and stimulate them to learn the fundamentals of child training, especially concerning the early years of childhood.

It is important to note that most of these programs are not considered remedial, not for underprivileged children and parents, but as positive and preventive. This movement has received its support largely from the groups of parents who already are giving thoughtful consideration to the training of their children, but who wish to do better; parents who wish to anticipate difficulties and who hope to profit by the experiences of others.

It must be remembered that the parental education movement is not confined to work with parents of preschool children. It is closely allied to the preschool movement because there can be little improvement of preschool children without improvement of home conditions and parental behavior. It is true that the increased emphasis upon consideration of the early years of child life has given a great impetus to the whole field of parental education. However, it is important to understand that practically all of the agencies discussed in this chapter are developing programs for parents of children of all ages.

b. The Purpose of the Survey. This survey is intended to give an idea of the extent of the parental education movement, to show the variety of organizations initiating and participating in programs for parent education, and to indicate sources of reliable information.

c. The Selection of Programs for Discussion. Because of the variety of organizations that have attempted to present child-study programs for parents at various times and in different sections of the United States, it is difficult to select and classify the programs that may be of special value to the educational group. In order to gain some degree of continuity in the discussion, it is necessary to limit it to organizations, institutions, and agencies that give pa-

rental education a definite place among their activities. Consequently, it is necessary to omit descriptions of those agencies that have a general or sporadic interest in parental education as well as the work of individuals which is not part of an organized program, regardless of its worth. A classification of the type of programs has been arranged with special description of experiments that appear significant.

d. Explanation of Terms. There are two terms commonly used in the description of parental education programs that require explanation.

The term *parents groups,* or *parents classes,* leads one to infer that these classes are attended by both fathers and mothers. Though the interest of the father is solicited, his membership in a group is an exception. The majority of classes are composed of mothers only. Where there is an appreciable enrollment of fathers in a class, and where a definite effort is made to reach the fathers either as members of a class with mothers or of a separate class, there is a special mention of this fact in the reports, publicity, etc.

The term *child development* is used throughout this chapter. It is a term which has developed out of the effort to emphasize the whole development of the child. Further interpretation of it will be found in Part II, Chapter I.

II. Description of the Programs of Selected Agencies

I. Organizations

There are many organizations which directly or indirectly have attempted to meet the interest of parents and professional groups in their desire for non-technical, scientific, yet easily interpreted material on child development. A hasty survey revealed about forty organizations—national, federal, public, private, philanthropic, and commercial—that are providing material on some phase of this subject.

However, few organizations have parental education as their chief objective or an interest in a consideration of the total aspect of child life. In various cases, as the names of the organizations suggest, it is only the physical or the mental or the social or the religious aspect of child development that is considered. Recent programs of organizations have aimed to assemble material upon

the child as an integrated personality with the definite interests and needs of the parent in mind.

The Child Study Association of America, the National Congress of Parents and Teachers, the American Association of University Women, the American Home Economics Association, and the Parents Publishing Association are organizations that have a definite interest in parental education and that have taken steps to meet the demand of the lay and professional groups.

a. Child Study Association of America.[2] This is perhaps the only organization which was conceived for the sole purpose of aiding parents in the rearing of their children. Organized in 1896 as the Society for the Study of Child Nature,[3] the Child Study Association of America is now a national organization with a membership of 4750, organized in 135 chapters in 23 states and 3 foreign countries. The work and development of the association is summarized as follows:

(1) Study groups: These chapters or study groups are composed of mothers and fathers who meet regularly to study and discuss the best current thought in the field of child psychology and training, and to get the benefit of group opinion in their individual problems. These groups are planned to cover the whole field of parental interest and consider children of all ages—infancy, early childhood, and adolescence—and specific aspects of sex education, progressive methods in education, and mental hygiene. Study groups are conducted at the Association's Headquarters in New York City under the leadership of the staff. Other groups conducted by the Association at settlement houses, schools, welfare centers, and religious centers in and around New York City reach parents of varied educational and economic background. In some of the larger cities of the United States, other child study centers have grown up, with the Child Study Association of America as the parent organization.

(2) Lectures and conferences: To supplement the work of the study groups, the Association conducts each year a program of lectures and conferences by specialists and authorities on various aspects of child life and education.

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[2] This report was written from material submitted by the Child Study Association.

[3] For a history of the early organization of this association, see Ch. II.

(3) Special committees: Study group work is vitally helped, too, by the information collected and disseminated by special committees of the Association: The Parents' Bibliography Committee, the Children's Literature Committee, the Committee on Information about Schools and Camps, the Music Committee, and the Committee on Research in Educational Experiments and Literature.

(4) Consultation service: A special consultation service has been inaugurated at the headquarters of the Association. Those parents whose problems in relation to their children, as revealed in child-study groups, seem to need more intensive study and assistance than the group can offer, are referred to the consultant. When the situation seems to call for special treatment, parents are directed to agencies established and equipped especially for such purposes.

(5) Library: A library of several thousand volumes is maintained for parents at the headquarters of the Association. Through a Unit Package Service, the library supplies groups outside of New York City with books.

(6) Publications: The Association publishes books, pamphlets, and book lists which embody study group and staff experience. *Child Study,* a monthly magazine, contains special articles, reviews of educational books and periodicals, reports of lectures and news in the field of child study.

(7) Training for leadership: The Association conducts each year an institute or training course for leaders. The Association also coöperates in conducting a course in Parental Education at Teachers College, Columbia University.

(8) Parents' conferences: In October, 1925, the Child Study Association held the first nation-wide Conference on Modern Parenthood, in New York City. This conference inspired others, and many similar conferences have followed within the past few years in various parts of the country.[4]

(9) Coöperation with other agencies: The Association is constantly called upon by other organizations and agencies for assistance of various kinds. It endeavors to avoid duplicating the work of other organizations, conceiving it to be the special task of the Association to make available reliable information, to interpret technical discoveries, and to impart tested experience to groups of parents organized under various auspices.

[4] A list of these conferences is given at the end of this chapter.

(10) Growth: The growth of interest in parental education is shown by the following statistics: The total number of study groups affiliated with the Child Study Association of America was in 1925-26, 56; in 1927-28, 135. The total number of members of the Association was in 1925-26, 2626; in 1927-28, 4750.

b. The National Congress of Parents and Teachers.[5] The National Congress of Parents and Teachers, with a membership of one and one-quarter million, with branch organizations in forty-seven states and in practically every city in the United States, has attempted to bring about a closer understanding between the school and the home.[6] There are many activities included in its general program of child welfare that are of service to mothers, as individuals, as leaders, and as members of groups. The Parent Teacher Associations may be given recognition for the splendid service as a coöperative agency with educational institutions in the promotion of parent education programs, for the stimulation for study they have given to parents, and for the provision they have made, in the form of *The Child Welfare Magazine,* for acquaintance with the agencies that are available to serve the child and parent.

The following brief report gives an idea of the present activities of the Association which are related to parent education.

(1) Parent-teacher associations: Through the programs of these associations parents are realizing what the school is doing and how they may help the school to do its best work. Where parent-teacher groups have been well organized, school terms have been lengthened, better-trained teachers have been demanded, better salaries have been paid, better-equipped and better-housed schools have been developed, and better community spirit has been secured.

(2) Preschool study circles: In connection with many parent-teacher associations, groups of mothers of preschool children have organized study circles. Many of these groups meet monthly or semi-monthly to read papers, listen to lectures, or discuss informally their problems and interests.

(3) The summer round-up: A campaign is conducted by the organization to urge parents to bring children about to enter school to a free clinic for physical examination. In this way parents are

[5] This report is written from material submitted by the National Congress of Parents and Teachers.

[6] For a discussion of the early history of this association, see Ch. II.

becoming cognizant of their responsibility to send into the school, at the age of five or six, children who are free from all remediable defects.

c. *The American Association of University Women.* From the beginning the American Association of University Women has been an educational organization.[7]

The present program in education, adopted in 1923, aims to give to parents, teachers, social workers, and other adults interested in the education of children a more scientific and objective understanding of children, from birth through adolescence, and to evaluate the agencies and methods used for their education. Through such study the association hopes to improve the methods of dealing with children in homes, schools, and other centers established for their education.

The educational activities extend through its 34,219 members and 439 branches, over the entire United States and into some foreign countries.

Below is a summary of the various activities which are a part of this program.

(1) Study by members: Study groups have been organized throughout the United States to study and discuss various aspects of the education of children. Study by individual members, fostering lectures, coöperating in conferences and institutes, and promoting extension courses from universities, are other methods used to further study work.

(2) Community activities: The members are urged, after a year or two of study, to initiate in the community, with the coöperation of local educational agencies, projects for the improvement of educational conditions. A wide variety of projects are under way. State programs for the improvement of rural education; book shelves for parents in public libraries; sponsoring nursery schools, play grounds, and clinics; improvement of day nurseries; toy exhibits; leadership in study groups of other organizations are some of the activities which are being promoted.

(3) Publications: Guidance materials for study groups, bulletins, and outlines for branch meetings are developed and published. Pamphlets and reprints containing subject matter pertaining to the

[7] For a discussion of this early work, see Ch. II.

national educational program are also published. One-fourth of each issue of the *Journal of the American Association of University Women* is reserved for the program in preschool, elementary, and adolescent education. Space is also given for items of educational interest in the *Month's Work,* a monthly publication of the Association.

(4) Distribution of material: The distribution of this material is not limited to members, but is being used by parent-teacher and child-study associations, mothers' clubs, libraries, book stores, church associations, college faculties, and individuals as well.

(5) Exhibits of material: Exhibits are sent to branch, state, and sectional meetings of the association and to conferences of other educational organizations engaged in related work.

(6) Library service: A traveling library of over 1200 books and pamphlets is maintained for study groups and individual members of the Association.

(7) Coöperation: An important phase of the work of the Educational Office is coöperation with other agencies and groups developing similar programs. Attendance at conferences, participation in programs of educational meetings, visits to educational centers, and membership on national committees are some of the ways in which coöperation is effected.

An outstanding evidence of the growth of the interest in parental education is shown by the following figures for the last four years. The dates run from September to September.

	1924-25	1925-26	1926-27	1927-28
Number of study groups organized	124	193	293	421
Pieces of literature distributed....	3,112	9,520	23,308	26,509
Number of books and pamphlets lent	.....	460	962	1,693

d. American Home Economics Association.[8] A large proportion of the 8839 members of the American Home Economics Association are teachers of home economics in public schools, colleges, and extension departments. Child care is an important part of many of these courses and the problems of food, clothing, and management are taught in relation to the needs of children. The physical care of the child has been largely emphasized in the

[8] This report was organized from material submitted by the American Home Economics Association.

courses as most of the teachers are best prepared to offer this aspect of child development.

So widespread, however, was the interest of the teachers in the inclusion in the home economics course of a more comprehensive program of child development that in the fall of 1926 the American Home Economics Association undertook a special service to its members and appointed a field worker in child development and parental education to organize and direct a four-year program which would aid the schools and colleges in the establishment of their child development courses and promote and strengthen this important phase of homemaking.

The child development and parental education program of the Association is designed primarily to serve teachers of home economics who are offering preparental or parental courses and homemakers who are interested in "professional improvement" in homemaking.

The program of the Association is organized to include the following activities:

(1) Field work: A general survey has been made of the work of the agencies in the field of child development and parental education for the purpose of determining the part which home economics teachers, research workers, and extension leaders can best render in promoting education for homemaking and parenthood.

Active coöperation between the American Home Economics Association and other organizations and national committees interested in the promotion of child development and parental education, has been maintained. Conferences have been held with administrators and home economics workers who wish advice in connection with the development of parental education programs in various home economics departments.

(2) Publications: The *Journal of Home Economics* publishes annotated abstracts of the periodical literature covering child development and parent education.

(3) Research and investigations: A survey of child development and parent education courses offered as a part of home economics instruction in schools and colleges, and by extension agencies in the forty-eight states, Alaska, Hawaii, and Porto Rico was made in coöperation with the 50 state and territorial supervisors of home

economics, 265 city supervisors of home economics, and 627 colleges offering residence and extension courses in home economics.

Child care courses which have been successfully presented to junior and senior high school girls are being studied in coöperation with a carefully selected group of home economics teachers of child care in the public schools.

A study of home management in relation to child care has been undertaken as a coöperative project with the 3500 alumnae members of two honor home economics fraternities.

A study of successful men and women with reference to the elements which make for satisfactory home and family relationships is being made with a selected group of families in coöperation with the Bureau of Home Economics, Department of Agriculture.

e. The Parents Publishing Association. The Parents Publishing Association was organized in 1925 with the first issue of a monthly magazine *Children, The Magazine for Parents,* in October, 1926.[9] The underlying idea was to disseminate by means of a magazine of wide circulation the best scientific information on the problems presented to parents by children. The magazine has been able to associate with it as board of editors, consultants, and advisory editors, the leading individuals and representatives of organizations who are authorities on all phases of child development in America to-day.

The articles are written in popular form, are profusely illustrated, and aim to be practical and helpful rather than strongly technical. The circulation of the magazine has grown until in April, 1928, it was about 75,000. The association also runs two weekly syndicated features—one in large town newspapers and the other in small-town publications. About 500,000 newspapers carry articles on parental education each month as a result of the material that is sent out. Each month *Children* contains a program for group discussion which many parent-teacher associations, mothers' clubs, and child-study groups are using to plan their group study. This association also publishes pamphlets on topics of interest to parents.

[9] The following facts were obtained from The Parents Publishing Association.

2. University and Other Centers for Child-Welfare Research

Perhaps the most significant development in this field and the one which undoubtedly will be the most permanent and reliable is the organization of centers for research in child development at several large universities and special institutions.

The programs at these centers are threefold—research, training of students, and the dissemination of material. These centers tend to stimulate the interest of specialists in the sciences relating to children, give continuity to research, attempt to correlate the scientific findings on the various aspects of child life, have modified the curricula of undergraduate and graduate colleges, and usually serve as a coördinating center for all interests relating to children in a given territory.

The institutes of child-welfare research, or child study, as these centers are designated, are located at the state universities of California, Iowa, and Minnesota; the Canadian universities of McGill and Toronto; the private universities of Columbia and Yale; and the two institutions especially organized for this purpose, the Merrill-Palmer School at Detroit, Michigan, and the Washington Child Research Center at Washington, D. C. It is impossible in this survey to give a detailed account of each center, but in order that a picture may be presented of the services rendered by these institutes a discussion will be given of the three pioneer organizations. The others will be mentioned briefly with emphasis on research programs and parent education.

The Yale Psycho-Clinic, the Iowa Child Welfare Research Station, and The Merrill-Palmer School of Homemaking are generally considered to have blazed the trail in the establishment of laboratories for the study of the preschool child, and, with the exception of the Yale Psycho-Clinic, were the first to emphasize the study of normal children. These institutions, though conceived for various purposes and functioning quite differently, have each made valuable contributions to research in child development and parent education, and have offered guidance and leadership to the institutions that were organized later.

a. The Iowa Child Welfare Research Station, State University of Iowa. In 1917 the Iowa Assembly passed a bill, accompanied by a permanent appropriation, for the establishment, as an integral part of the university, of the Iowa Child Welfare Research Station,

the purpose of which was stated to be "the investigation of the best scientific methods of conserving and developing the normal child, the dissemination of the information acquired by such investigation, and the training of students for work in such fields."[10] This was a radically new idea, largely the result of thoughtful and energetic work of leading women in the state.

The early projects undertaken were studies in physical, mental, emotional, social, and moral development. To facilitate these studies, a preschool[11] for psychological study and an infant laboratory for studies in nutrition were established. These early projects have developed into a series of preschool experiments that incorporate the study of the whole child, and a number of coöperative experiments with the various departments of the University, the state, and the national child-welfare organizations.[12]

Increased state appropriations and grants from national and private organizations have made possible the expansion of the initial activities. In 1924 the program in parent education was organized. Study and discussion groups under trained leadership were organized in cities, small towns, and rural districts of the state. These groups were supplied with traveling libraries sent from the department at the University. The first courses for parents on a campus of a University were offered during the summer session of 1925. In September of the same year a state-wide program of parental education was initiated. Field laboratories in parental education were established in two cities with the coöperation of the public school boards.[13] Resident and extension courses in child development and parent education were developed at Iowa State College[14] and Iowa State Teachers College.[15] The Iowa Child Welfare Research Station was designated as the coördinating center by the State Board of Education.

In September, 1926, the Iowa State Council of Child Study and Parent Education was organized, having as its constituent bodies,

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[10] *University of Iowa News Bulletin,* Vol. III, June, 1928, No. 6.

[11] For a description of the nursery school in connection with this Station, see Ch. VIII.

[12] "Administration and Scope of the Iowa Child Welfare Research Station." *University of Iowa Studies, Aims, and Progress of Research.* New Series No. 78, June 1, 1924. Published by the University, Iowa City.

[13] Refer this chapter, Local School Systems.

[14] Refer this chapter, Home Economics Extension in Land Grant Colleges, Iowa State College of Agriculture and Mechanic Arts.

[15] Refer this chapter, Teachers Colleges and Normal Schools.

state representatives of the Iowa Congress of Parents and Teachers, the American Association of University Women, the Woman's Christian Temperance Union of Iowa, the State Federation of Women's Clubs, the Women's Department of the Iowa Farm Bureau Federation, the State Department of Health, and also representatives of the extension staff of the State University, the State College of Agriculture and Mechanic Arts, and the State Teachers College. This Council each year holds a state conference of Child Study and Parent Education.

The courses for parents, both in residence and extension, have increased, with a corresponding expansion of staff and students in research and instruction. The program of research as taken from a later publicity item[16] is outlined as follows: In conjunction with the Research Station the College of Education will study the curriculum as applied to child welfare; the Institute of Character Research the morals and personality of the child; the Department of Psychology, as a part of a continuous coöperative project, will study the visual art talent. The departments of speech, sociology, psychiatry, pediatrics, and nutrition will continue and enlarge upon their present programs. The latter department will be considerably extended and enlarged, as well as the laboratory for the study of infants. The preschools will be expanded and additional studies will be made of adolescence.

b. Institute of Child Welfare, University of Minnesota, Minn.[17] The Institute of Child Welfare of the University of Minnesota was established in July, 1925, for a three-fold purpose: first, the conduct of fundamental and practical research on children; second, the training of workers both for service and research in the child-welfare field; and third, the dissemination of knowledge and the education of parents in the care and training of children.

The Institute is organized as an independent administrative unit of the University and maintains coöperative relationships with a considerable number of University departments: with Anatomy, Pediatrics, and Nervous and Mental diseases in the Medical School, with Psychology, Sociology, and Public Health Nursing in the College of Arts and Sciences, with Educational Psychology and

[16] *University of Iowa News Bulletin*, 3: June, 1928, No. 6.

[17] This discussion was written from a report prepared by the Institute for the Yearbook.

Education in the College of Education, and with Home Economics in the College of Agriculture, Forestry and Home Economics. In addition, coöperative relations are maintained with the General Extension Division and with the Agricultural Extension Division of the University.

The Institute also coöperates with many outside agencies, both state and local, in the conduct of its research and parental education program.

The research projects undertaken by the Institute and the cooperating departments cover many fields—anatomy, physiology, pediatrics, psychology, education, nutrition, clothing, sociology, and others. During the three years of Institute existence, some 98 projects have been started. Some projects cover a term of years, others are relatively brief.[18]

The parental education activities of the Institute may be summarized under five main heads: (a) credit extension courses; (b) correspondence courses; (c) study groups in cities; (d) agricultural extension projects; and (e) miscellaneous activities such as the radio course, public lectures, exhibits at the state fair, parental education conferences, and traveling libraries.

c. Institute of Child Study, University of California.[19] The nursery school opened and the research program of the Institute of Child Study at the University of California began October, 1927. The parent education program was initiated in August, 1926.[20] The Institute of Child Welfare is organized as a separate unit directly responsible to the President of the University, with coöperative relationship to all departments in the University. The Director of the Institute is also the Chief of the Bureau of Child Study and Parent Education of the State Department of Education.[21]

The following are the purposes of the Institute: (a) to make a thorough-going cumulative study of the development of a considerable number of children from birth through the first 18 years of life; (b) to make an intensive study of the development of a limited number of children between the ages of 18 months and 36

[18] For a list of research studies see "Report of the Institute of Child Welfare," Vol. XXX, No. 87, January 27, 1928 (Bulletin University of Minnesota, Minneapolis, Minn.).

[19] This report was written from notes submitted by the Institute.

[20] See elsewhere in this chapter.

[21] *Ibid.*

months in a nursery school at the Institute; (c) to make a critical study of methods of education for parenthood; (d) to undertake research upon special problems connected with child development as suggested by several departments of the University.

d. St. George School for Child Study, University of Toronto.[22] The St. George School for Child Study was established in 1925 at the Provincial University of Toronto as a child-study development. The nursery school opened in January, 1926. Various departments of the University, such as psychology, anatomy, physiology, dentistry, psychiatry, education, household sciences, pediatrics, and the school of public health nursing, work jointly on research problems.

The school considers its function to be not to create a new organization, but (a) to carry on investigations into sound principles of child training, and (b) to train leaders who can make such principles effective by working through existing organizations.

The research and parental education program is under the direction of the head of the psychology department. For the present the research program is devoted to studies in child guidance and genetic psychology. Five study courses in parent education are offered which may be attended in successive years: Habit Training—Preschool Age; Management of Child—Preschool Age; Thinking and Acting—School Age; Adolescence; Family Relationship.

e. McGill University. The experiment at McGill was fostered by the Canadian National Committee for Mental Hygiene, and opened with the establishment of a nursery school in 1925. Students of the school comprise public health nurses, social workers, staff workers of well-baby clinics and day nurseries, as well as graduate and undergraduate students within the regular university departments. There is a research staff of four members. Parental education is carried on by the Mental Hygiene Staff in collaboration with the nursery school. During 1926-27 seven groups were conducted, and the parents of the nursery pupils received particular attention through special lectures and meetings. The McGill Nursery School's influence on the Child Welfare Association of Montreal has been marked, especially by the introduction of group

[22] This report was written from notes submitted by the St. George School for Child Study.

teaching of parents in place of the individual type of instruction previously in vogue among public health organizations. The Association has been particularly helpful to the nursery school in arranging developmental clinics for the study and teaching of desirable mental and health habits.

f. Yale Psycho-Clinic, Yale University, New Haven, Connecticut. The Yale Psycho-Clinic was established in 1911. Its early purpose was to make psychological examinations of backward and handicapped children and to give advice in regard to the educational treatment of these children. The guidance nursery[23] was established in 1926 as part of an extension of the clinical and research program.

The general purpose of the clinic includes: (a) clinical and child guidance service for children, with special attention to children of preschool age; (b) genetic research for the determination of norms of development, the study of characteristics of mental growth, and formulation of methods of developmental diagnosis.

The clinic is organized as a quasi-independent unit within the Graduate School and the Institute of Psychology, with affiliations with the Department of Education and the School of Medicine. Some twenty-five state and local community social agencies refer cases to the clinic. The State Bureau of Child Welfare refers the largest proportion of cases.

Courses and training are limited chiefly to graduate students. Attention is given to training of research workers.

There are no special courses or extension activities in the field of parental training. Work with parents is, for the most part, conducted on an individualized guidance basis.

g. Institute of Child Welfare Research, Teachers College, Columbia University, New York City.[24] The Institute for Child Welfare Research, established in 1924, is an independent unit in Teachers College, Columbia University, coördinated with the School of Education and the School of Practical Arts.[25] It was established for the purpose of conducting research and promoting investigation in the preschool period of education and the non-academic phases of elementary education.

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[23] For a description of the guidance nursery, see Ch. VIII.

[24] The report was written from notes submitted by the Institute.

[25] For a description of the nursery school in connection with this Institute, see Chapter VIII.

The departments of nutrition and kindergarten-first grade have representatives on the staff of the Institute. The relation to other departments is of a consultant and coöperative nature. The Child Study Association of America has been closely associated with the Institute and the director is consultant in parental education on the Institute staff. The Institute has a rather wide consultant relationship with the various educational and social service associations in the city.

The program of research has been along three general lines: (1) social, psychological reactions of children, (2) nutrition experiments, and (3) physiological research carried on by the Medical Department.

Through the students who are enrolled in the Institute as well as the Institute staff, extension work in parental education has been developed. A major course is offered for students training to be leaders in the field of parental education.[26]

h. The Merrill-Palmer School of Homemaking.[27] The Merrill-Palmer School of Homemaking organized at Detroit, Michigan, in 1920, has as its chief purpose the education of young women for parenthood. This school has given a new emphasis to home economics in the provision of a nursery school as laboratory for the study and training of young children. Undergraduate students, largely of home economics departments, come from various schools and colleges in the United States to attend this school for one quarter or one semester. Although it prepared its large program for these resident students and the extension classes for girls and women in Detroit and Wayne County, it soon found it necessary to organize graduate courses and enlarge its research program to meet the demands that were being made upon it in this field. The school now is classed as a center of research in child development and parent education. The graduate students come from varied fields—psychology, home economics, chemistry, and other subjects related to child development. Research has been undertaken in the physical growth, the psychology, and the education of preschool children.

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[26] Another phase of the parental education program of Teachers College, Columbia University, is discussed under Teachers Colleges in this chapter.

[27] For a detailed discussion of the organization of the Merrill-Palmer School, see Ch. XI. For a description of the Merrill-Palmer nursery school, see Ch. VIII.

The following is an outline of the parental education program of the school as presented in its Sixth Annual Report:[28]

1. *Parents of Children in the Nursery Schools Instructed by These Methods*
   - Through the Child Himself
   - Through Special Conferences with Various Staff Members
   - Daily Casual Contacts when Children are Brought
   - Attendance at Physical Examinations
   - Through Blanks as Filled in by Conference with Specialists
   - Through Record-Keeping Required of Parents
   - Through Home Visits
   - Through Monthly Meetings
   - Special Courses (Behavior Problems and Methods of Training)
   - Instruction in Special Methods of Training: Corrective Exercises, Feeding, Behavior
   - Assistance in Research Problems: Sleep, Food
2. *Parents of Children Brought to the Consultation Center*
   - Preliminary Interview with Director, Who Determines Need
   - Determination of Facts by Expert
   - Outline of Course of Procedure for Parents Following Complete Diagnosis
   - Supervision and Reports at Definite Intervals
   - Supplemental Bibliographies in Some Cases
3. *Outside Individuals Seeking Assistance from Specialists*
   - Conferences with Parents in Clinics at Children's Hospital and Board of Health
   - Supplying of Reading Lists Following Conference
   - Reading Lists Prepared for Use of Physicians for Patients
   - Conference with Visitors at School
4. *Parental Groups Outside the Nursery Schools*
   - Regularly Organized Courses
   - Special Lectures

In carrying out its program of parental education the school has conducted a number of projects in Detroit and its environs. Among them are clinical service in the Children's Hospital and the Board of Health; conducting parent groups in connection with several local and state organizations, and organizing demonstration nursery schools as laboratories for preparental instruction at Highland Park and Ann Arbor.

i. The Washington Child Research Center, Washington, D. C. The Washington Child Research Center was established in 1928 for the study of normal children and parental education. This center

[28] *Sixth Annual Report*, 1925, pp. 54-56.

is unique in that it is a coöperative venture of eight agencies in Washington, D. C. Three of these agencies are national organizations: American Association of University Women, American Home Economics Association, and the Child Development Committee of the Division of Psychology and Anthropology of the National Research Council; three of them are government bureaus: Bureau of Home Economics, Department of Agriculture; Bureau of Education, Department of the Interior; and the United States Public Health Service. Each of these six agencies has a well-developed program in research or education directly related to the welfare of the child in the home. The establishment of the Center is the result of a felt need on the part of these agencies for direct contact with children and for a laboratory for developing and evaluating techniques for child and parent education. The executive committee consists of one member from each of these agencies and one member from each of two local universities: University of Maryland, and George Washington University.

The Center acts as an independent institution, although it is closely affiliated with the agencies mentioned and with other universities and organizations in the city. Its courses are open to students from affiliated institutions. Research is conducted by personnel from affiliated agencies as well as by the staff of the Center.

The center maintains a nursery school and a consultation center for parents.

j. Other Research Centers. Besides these centers for child welfare research there are a number of other research units, either independent, or associated with a department of a university or social agency which are reported elsewhere in this chapter. Some of these programs are new, but a number have been devoted to some special interest in child life for a period of years. The centers of special interest are: the Institute for Juvenile Research, Chicago, with a newly organized preschool branch; the Institute for Child Guidance, to replace the Bureau for Child Guidance, New York City; the Child Institute in the Department of Psychology, Johns Hopkins University; the nursery schools with research programs in the Department of Home Economics at the University of Cincinnati, and the New York State College of Home Economics, Cornell University.

3. Teachers Colleges and Normal Schools

The parental education programs in teachers' colleges, normal schools, and departments of education in state and private universities are still in the early stage of organization. The scope and function of such a program in a teacher training institution has not yet been clearly defined by educators. The program may include one or more of the following: (1) lectures on child development, with or without laboratory facilities, (2) a study of children in a nursery school, (3) observance or participation in classes for parents, (4) provision for the training of leaders for child study discussion groups, (5) research studies on child development and parental education and (6) service of a behavior clinic. Through the parents' classes in a nursery school which serves as a laboratory for the academic course, the student develops an understanding attitude toward the parent's problems and toward the child in the school and home. This program may be extended further so as to include a specific course in parental education, in which methods of organization of classes, courses of study, discussion of parents' problems, and perhaps experience in conducting discussion groups of parents may be given. The behavior clinic assists the parent of the problem child and provides further laboratory facilities for students.

The establishment of a nursery school, preschool laboratory, or prekindergarten, as the laboratory may be designated, usually initiates the program. In this laboratory the students in kindergarten and primary education (the department in which these courses are usually offered) have the opportunity to study the early development of children with equal attention to the physical, emotional, educational, and social growth, not only in school but also in the home and in the community.

a. Iowa State Teachers College, Cedar Falls, Iowa. At the Iowa State Teachers College besides the course in child development and a prekindergarten for observation of students in kindergarten and primary education, an extension course in child development for teachers was organized in 1926, followed by a course in genetics in 1927. A number of classes for which credit was given were held in several school systems throughout the state. A specialist in child study was placed on the extension staff to organize and direct these classes. This course attempts to acquaint the teacher with the re-

search program, with the literature in this field, and to arouse an interest in child development, with particular emphasis on behavior problems. This program is part of a statewide organization for Child Study and Parent Education in Iowa with the Iowa Child Welfare Research Center as a coördinating center.[29]

b. State Teachers College, Milwaukee, Wisconsin. This institution has a course in parental education which is required of all third- and fourth-year students of the kindergarten-primary department. The course includes discussions relative to the obligation of the home, school, and community to the child, with consideration of the ways in which these obligations are being met; problems in the education of parents; ways in which the teacher may cooperate with home and community to raise the status of child welfare. The students make out programs for study groups, devise blanks for recording parents' observations, and organize reading lists for parents. In the Elementary Training School where the students observe and do their practice teaching, the parents of children in the nursery school spend one day in every two weeks at school and the nursery-school teacher makes frequent home visits. Thus, through theory courses and contact with an active school program, students preparing to be teachers are getting a point of view towards home and parents which ought to bring about a more integrated educational program for children.

c. The National Kindergarten and Elementary College.[30] The present program for parental education of the National Kindergarten and Elementary College, at Evanston, Illinois, was initiated February, 1926. A department of parental education and a behavior clinic were organized to serve the parents, either as patrons of the school or members of the community.

The purpose of the program is: (1) to coöperate with parents of children in the Demonstration School at the College in training them for their specific responsibilities in the home education of their children and to give them an intelligent understanding of the school program; and (2) to provide training and help by means

[29] The Iowa state program is described in the preceding pages of this chapter.

[30] This report was written from material prepared by the President for the Yearbook Committee.

of a behavior clinic for any parents in the community who may wish to avail themselves of the opportunity.

The parental education program provides a general program, special courses for parents, and consultation service. The general program consists of four meetings yearly of parents of all children in the demonstration school, public lectures by outside speakers, evening conferences with room teachers, and teas and discussion groups for mothers and teachers of each room.

Two courses—behavior problems, and materials and methods for home education—are arranged for parents. These are not the usual academic courses required for the student in training, but are organized especially to meet the parents' needs and problems. Besides these two courses, many parents have enrolled in the College for regular courses which interest them, but which were offered primarily for young women preparing to be teachers.

The behavior clinic offers consultation service to any parent and has been especially helpful to those enrolled in the course on behavior problems.

There also is an effort made to impress the student in training with the responsibilities a teacher should take with parents' problems, the organization of programs for parent-teacher meetings, training in handling the common problems which may arise between parent and teacher, and so forth. Besides this there is a research program, a nursery school, and a course for the training of nursery school teachers.[31]

The college also has an experiment in preschool and parent education in a foreign community at the Mary Crane Nursery School[32] in the Hull House Settlement in Chicago.

d. Teachers College, Columbia University. The Institute of Child Welfare Research, Teachers College, Columbia University, has developed a program in parental education in conjunction with the Child Study Association.[33]

Besides the work in the Institute, the kindergarten-primary department has developed a program of parent and teacher co-

[31] For a further account of the training of nursery school teachers, see Ch. XIII.

[32] A description of the Mary Crane Nursery School is given in Ch. VIII.

[33] A discussion of the program at the Child Welfare Research Institute of Teachers College has been given previously in this chapter.

operation in connection with the practice schools. The program includes an exchange of reports and records between parents and teachers, home visiting, school visiting by parents, individual conferences, and group meetings. Students in practice teaching have an opportunity to participate in these activities. The theory courses include discussions of the value of parental education and a consideration of the total life of the child.

4. Women's Colleges

The colleges for women have also contributed to this field. Two of the recent innovations for the education of women that warrant attention are the Institute for the Coördination of Women's Interests at Smith College and the Department of Euthenics at Vassar College. These experiments, though they differ in purpose and function, attack vital problems in the education for women, in the status of home and social life, and may serve as a stimulus for improvement in social and economic conditions and for advancement of the status of women.

a. The Institute for the Coördination of Women's Interests.[34] This experiment at Smith College is more a research study of the economic and professional problems in the lives of women of to-day than a project in parental education. The Institute was organized in 1925 "with the purpose of finding principles and methods for the continuity of women's individual intellectual or professional interests, in harmony with their family responsibilities. The early statements of the program and policy of the Institute brought out that the educated women's present disuse after marriage of special powers which it has cost much in money, time, and effort to achieve, is an element of social waste and a source of much personal regret, in some cases mounting to unhappiness. The central aim of the Institute was thus seen as an aim toward the conservation of valuable social material. . . .

"It was clear that for the persons we had in mind—that is, women college graduates, relatively young, with family responsibilities, and with incomes in the professional or academic range, types of coöperative service or assistance in the household offered the most immediately fruitful field for study, for this reason: that

[34] For further discussion, see Ch. II.

such arrangements, if successful, gave, along with money saving and assurance of quality, a certain individual release from care or interruption which was the one great desideratum."[35]

The most important experiment in household adjustments which the Institute has undertaken has been the coöperative nursery school at Smith College.[36]

b. The Institute of Euthenics, Vassar College. As an independent experiment in conjunction with the recently organized Department of Euthenics at Vassar College,[37] an Institute of Euthenics was organized for one month during the summer of 1926. Its initial objective was to offer to Vassar alumnae who were mothers the results of scientific research in education, human behavior, child development, and the techniques of homemaking. These courses have continued for the third year with enlarged facilities, increased staff, and unrestricted enrollment of college graduates or those with an equivalent preparation. The Institute has the most inclusive program in parental education that has been arranged. It not only gives consideration to the study of the child and provides a nursery school and a primary group of children as an observation laboratory for the students, but also offers such courses in household techniques as nutrition, practical cookery, household technology, and gardening, and courses in economics with emphasis upon laws affecting women and the home, together with a study of human relationships. It attempts to fulfill in every respect the idea of what the word *euthenics* signifies—"the improvement of the race through environment."[38]

5. Other Colleges and Universities

There are a number of colleges and universities that have arranged courses in child study for parents, either as a part of the extension program or as special classes in the college curriculum. In most cases the realization of the parents for the need of a better

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[35] Howes, Ethel Puffer, and Beach, Dorothea. *The Coöperative Nursery School,* Smith College Publication, 1928.

[36] For a description of this school, see Ch. VIII.

[37] See Ch. IX, also *Vassar College Bulletin,* 1927-28.

[38] A report of the Institute held in 1926 may be found in the following magazines: *Journal* of the American Association of University Women, April, 1927; *The Child Study Bulletin,* October, 1926; *The Woman's Citizen,* now *Women's Journal,* October, 1926; The *Survey Graphic,* December, 1926.

understanding of their problems was the stimulus for the organization of these courses. The wide variance in the department or division of the college that directed and initiated such a program is due largely to the personality, ability, and interests of certain faculty members.

a. Cleveland College, Western Reserve University. A number of social agencies[39] in Cleveland realized the need of a method for reaching the parents of children with behavior problems. In an attempt to meet this situation sufficient interest was created to organize an extension course in child study at the School of Applied Social Science of Western Reserve University. The first course open to parents, visiting teachers, nurses, and social workers was offered during the second half-year 1924-25. A professor of psychology of the Cleveland School of Education, assisted by specialists, conducted the course. The course was designed to afford training in the control of conduct of young children, particularly in the home, and for the training of leaders of child-study groups. With emphasis on the behavior of normal children and the use of the latest literature in this field, the work consisted of discussions, lectures, assigned readings, and continuous observations of children. The interest shown in the first class and the demand for further study warranted the continuance of this course with an additional one to cover the development of the school child.

These courses were moved from the School of Applied Social Sciences to Cleveland College, a unit for adult education of Western Reserve University, and organized into a Division of Parental Education in February, 1927. Accordingly, the courses offered in this department are more inclusive of home and family problems. The announcement for the fall term 1928 offers the following: Promotion of Health, Prevention of Disease, and Care of the Sick in the Home; Nutrition and the Cultivation of Correct Food Habits in Children in Relation to the Development of the Child at Different Ages; Housekeeping and Good Management: Their Contribution to Family Life and Child Welfare; Art in the Home; The Psychology and Education of Children of Preschool Age; The Psychology and Home Education of the Child of Six to Twelve; The Psychology and Home Education of the Adolescent; Family Rela-

[39] See further on in this chapter under "Social Agencies."

tions: The Emotional and Intellectual Factors; Family Relations: Further Analysis of the Mechanisms Involved; Parental Education Leadership; Fathers' Problems in the Home Education of Children; Training Course for Parent-Teacher Work.

b. Johns Hopkins University.[40] The members of the child-study group of the Baltimore branch of the American Association of University Women and the Chapter of the Child Study Association gave the stimulus for the arrangement of an extension course for parents by the Department of Psychology of Johns Hopkins University in 1925 and 1926. With the organization of a child institute under the department of psychology various services have been arranged for parents. The primary purpose of the Institute is to provide facilities for research toward the solution of problems in child psychology. It is the aim of the Institute to select those children whose parents are interested to coöperate in the analysis of the factors that determine the behavior of the child. This involves observation by the parent of the effect of home conditions upon the child and willingness to participate in conferences and in the redirection of the activities of the child. Parents are also given the opportunity to observe under direction the child in the Institute set-up.

Courses in child psychology are open to parents. Members of the Institute staff and graduate students specializing in the study of the child serve as leaders or special lecturers for child-study groups organized by several associations. As a result of these contacts parents come to the Institute for conferences concerning problems of child development and children are brought for special examinations.

c. University of Cincinnati.[41] The courses in parent education at the University of Cincinnati are directed by a professor of child care and training in the School of Household Administration. This program consists largely in the training for leadership of a large number of groups "which range from Junior League to the poorest district of the city." The Mothers' Training Center Association, consisting of a group of citizens interested in the problems of child care and parent education, is largely responsible for this interest, the organization of groups, and the financing of the project. The

[40] From a recent report submitted by the Institute.

[41] For a discussion of the preparental work at this institution, see Ch. XI.

course offered is outlined briefly: content course, short course in technique of leadership, special conference to take up specific topics for discussion group, observation of children in nursery schools, and supervision of group discussions. The University also has a research program in child development.

6. Home Economics Extension in Land Grant Colleges

A change of emphasis in home economics education from housekeeping to homemaking is being felt in the extension programs as well as the academic courses. Child Care and Training projects are given some consideration among the many projects that are offered in household technology by directors of extension in home economics at the land grant colleges in each state.[42] Frequently this project is initiated through the foresight of women, lay and professional, who realize the inadequacy of the present program of household techniques and see the value of the dissemination of information on child study to parents. There is a general need for the reorganization of most extension programs to meet the interests of the modern homemaker. An attempt to accomplish this is being made by the American Home Economics Association.[43]

a. State College of Agriculture and Mechanic Arts, University of Georgia. The extension and resident courses in child study of the Division of Home Economics at the Georgia State College of Agriculture and Mechanic Arts, organized in 1925, were directed for three years by one specialist only. With this limited staff a less comprehensive and intensive program was offered than in the states where a larger staff was provided to initiate such a project. The extent of its acceptance in the state was largely dependent upon the efforts of the individuals and organizations that could be stimulated to take responsibility for the promotion of this new movement. Therefore a general publicity program with emphasis on subject matter and the training for leadership was given. The training of leaders consists in courses for county and home demonstration agents, teachers of home economics, and social workers; institute programs, and special instruction for directors of child-study

[42] For a discussion of the provision in regard to the Smith-Lever appropriation, see the Reports of the Extension Service, United States Department of Agriculture.

[43] See earlier in this chapter under "Organizations," also Ch. II.

groups from organizations such as the American Association of University Women, Parent-Teacher Associations, and Federation of Women's Clubs.

This work is extended to the colored people of Georgia through the colored county and home demonstration agents, teachers, social workers, and parent-teacher associations.

The courses in extension and in residence will be reorganized for 1928-9. Since July 1, 1928, the staff has been enlarged to seven members. A nursery school and facilities for research are a part of the new program.

b. University of Illinois.[44] One of the earliest experiments in the organization of a child care and training project as part of home economics extension service was conducted in Illinois. In February, 1925, a specialist in child care and training was appointed for part time on the staff of the Home Economics Extension Service of the University. At this date one county had already adopted the project under the leadership of the Home Advisor.[45]

Child-study groups were organized in six counties under the direction of the specialist. In coöperation with the specialist, the home advisor and the Executive Board of the Home Bureau decided upon policies for work in the county. As might be expected, these policies differed. In some counties enrollment was limited to parents of preschool children; in others, meetings were open to all. In most of the counties a series of monthly meetings was held at one or two communities; in one county meetings were held at various points in order to cover a wider territory and reach a greater number of people. In but one county did the specialist train local leaders to direct a portion of the work.

In January, 1926, a specialist was appointed for full time to continue and expand the extension program and to organize resident work. The resident course, however, was not offered until the spring semester, 1927.

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[44] This discussion was prepared from a report written for the Yearbook by the specialist in Child Care and Training.

[45] Illinois is one of the three states that have organized a Home Bureau with a Home Advisor as its professional representative to arrange for the local extension service in the county in lieu of the Farm Bureau or a local committee and a Home Demonstration Agent, as is the plan common in most states. In 1925, there were twenty counties with organized Home Bureaus directed by Home Advisors in Illinois.

The extension program has been expanded to include nineteen counties, a portion of which have had a series of meetings continuing three, four, five, or six months of one year; another group has continued the work for two years, while one county has had a series of meetings for the fourth successive year. Over two hundred communities have been represented in the organized study groups in the various counties.

In these study groups enrollment has been limited in order to encourage free discussion, and emphasis has been put upon reading and study. Parents are urged to find out what scientists have to say, then try to apply the knowledge gained to their own particular home and child-development problems.

c. Iowa State College of Agriculture and Mechanic Arts. "Extension classes in child care and training were first organized at Iowa State College in November, 1925, after the subject had been successfully introduced as part of the home economics curriculum for undergraduate students.[46] In the first year of the extension classes, monthly instruction was given to fourteen study groups of women by the extension specialist in child care and training. The groups were sponsored by such organizations as the Farm Bureau, the local branch of the American Association of University Women, the Parent-Teacher Association, and the Federation of Women's Clubs, but not all the women in the study groups were members of these associations."

"In addition to study groups similar to those of 1925-26, the leader-training plan so successfully used in other fields of the cooperative extension service has been inaugurated with five child-study groups in one county. Each group consists of about twenty women, chosen by their communities because of special ability and qualities of leadership. The college specialist in child care and training meets with each group for one day a month from November to August and trains them in the subject matter needed to lead the work of their local study groups. Printed or mimeographed material on the points emphasized is given to each leader for the members of her group, so that she need not attempt to give original advice for solving problems of child health and behavior."[47]

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[46] For discussion of preparental courses with undergraduate students, see Ch. XI.

[47] Excerpts from *Journal of Home Economics,* Vol. 19, No. 5, May, 1927, 278-280.

This program is part of the state program for Child Study and Parent Education for which the Iowa Child Welfare Research Station of the State University serves as the coördinating center and the State Council for Child Study and Parent Education as a cooperative agency.

d. New York State College of Home Economics, Cornell University. A child-study project was introduced in the extension program of the New York State College of Home Economics in 1925, at the same time that the nursery school, the resident courses, and the research program in child study were established on the campus.[48]

This extension program was organized on the policy that at least for the first few years the child-study lessons could not be presented by local leaders, that the subject matter for child training was in a different category from that of household arts and sciences, and that therefore it was necessary to experiment in the methods for the selection and training of leaders for the presentation of this subject matter. It implies that the women whom it is customary for the Home Bureau to appoint as local leaders to transmit the subject matter on various phases of household technology from the specialist to a local group will not necessarily qualify for the leadership of a child-study group.

The program was organized on a county-wide plan, with an attempt to coöperate with all agencies and institutions interested in the welfare of children. To initiate such a project, a five-day institute, which provided an inclusive program on all phases of child life, was held. This was followed by the organization of study and discussion groups, supplemented by service to individuals on special problems, home visits, bibliographies of books for children and parents, exhibit of materials, outlines of lectures, selected pamphlets and so forth.

In 1927-28 two specialists were added to the staff. The program consisted of a series of six lecture-discussions on child behavior, which were conducted at county-wide meetings.

e. Ohio State University, Columbus, Ohio. The child training project of the extension service in Home Economics of the College of Agriculture, Ohio State University, is conducted by the health specialist who has been directing classes in positive health among the rural women of the state since 1919. The classes in child study

[48] See this chapter, section on "Nursery Schools," also Ch. XI.

developed from the health project, which consisted of lessons on prenatal care, infant care, care of the preschool child, home care of the sick, and nursing in communicable diseases. The specialist found in giving these courses on the care of the child, especially on the training of health habits, that there were other problems involved and many questions asked by the mothers that were not included in the subject matter on physical care of the child.[49]

In order to meet this demand the child-study project in Ohio was initiated in the summer of 1926. The groups met once a month for four months for a half-day with the specialist. The discussions in most instances were given to the following topics: habit formation; obedience; punishment and rewards; anger, jealousy, lies; the use of money, or play, playthings, and imagination. A set of books was furnished to each study group by the State Library. The meetings consisted mainly of discussion of reading done by members on the problems confronting them and subject matter presented by the specialist.

Each member of these groups has the following responsibilities; regular attendance at meeting, reading of assignment, reports on reading, keeping records of the behavior of the child or of suggestions received in class which were incorporated in the home.

"So far, the local leader plan has not been used because this work is so new that it seems wiser to progress slowly and carefully. The danger of a leader giving all sorts of advice with behavior problems seems rather great."[50]

7. State Departments of Vocational Education

Through the state departments of vocational education with funds provided by the Smith-Hughes appropriation, a program in child study has been initiated in several states as part of the adult program of vocational home economics. This program is supposed to offer to the urban woman what the extension service, provided by the Smith-Lever fund, gives to the rural woman.[51]

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[49] For discussion of the reorganization of health programs to include all phases of child development, see under "Health Agencies."

[50] Excerpts from report of health specialist Extension service, College of Agriculture, Ohio State University.

[51] For a discussion of the Smith-Lever program see under "Home Economics Extension in Land Grant Colleges." For a discussion of the provisions in regard to the use of the Smith-Hughes appropriation, see the Report of the Bureau of Vocational Education.

The introduction of these courses into the vocational education program of Oklahoma and Nebraska has given a broader interpretation of the law and is suggestive of further possibilities for the development of a program. The principal innovations in the administration of this program are:

(1) The employment of teachers other than four-year home economics majors with professional, vocational or practical homemaking experience. Public health nurses, specialists in behavior problems or parent education, and mothers with an understanding attitude toward children have served as leaders of discussion groups.

(2) The placing of these teachers on the staff of a public school system for service to parents.

(3) The adjustment of the budget to provide for these classes in the regular school system or the part-time and evening classes. Thus another means of financing these courses is provided. Through the foresight and coöperation of the state supervisor, the local director of vocational classes, the superintendent of schools, and the parents, it is now possible to finance classes in child study in almost any community.

a. Oklahoma.[52] In Oklahoma a program in parental education has been conducted during the past seven years under the direction of the State Department of Vocational Education, Home Economics Division, in coöperation with public schools of the state. This program is a phase of adult home economics education. The classes in Oklahoma have been termed "mothercraft" classes. At present five full-time teachers are engaged.

Instruction is arranged in progressive units, which permits both freedom and choice in enrollment according to specific needs or continued attendance. Units include health and behavior adjustment problems pertaining to the preschool child, the school child, and the adolescent, such phases of home management and family relationships as will provide a suitable environment for adequate child development, and sufficient leisure on the part of mothers to secure time to devote to the interests of their children.

The mothercraft program has become a civic institution in many cities where it is under way. Community enterprises and

[52] Report written by the State Supervisor of Home Economics Education, Oklahoma.

projects, such as the sponsoring of public lectures and programs, preschool clinics, book exhibits, and back-yard playground contests have been sponsored by these students.

"The continued increase in enrollment and the requests for these classes in other cities is the best indication of the fact that such classes are meeting needs and giving instruction which parents want. It would seem that possibilities are limited only by ability to secure adequately trained teachers, and financial support."[53] The total enrollment in these classes for 1927-28 was between 4000 and 4500.

b. Nebraska. The "Mother Training Course," as these classes are designated in Nebraska, was begun in Omaha in 1922. It has been offered at the part-time and evening classes of the Vocational Education program of several cities in the state since 1923. The initial course offered was "Child Care and Home Management." This has been reorganized and extended to include many phases of home-making and family relationship. The course is organized in short units of six to ten meetings. Usually the interest of the classes demands continuation after the first unit is completed. Local leaders are recruited and trained by means of personal conferences and correspondence with either local or state supervisors.

Part-time teachers are employed, except in the larger cities such as Lincoln and Omaha. The latter has a full-time supervisor for these courses.

In 1927-28 the work was extended in four rural centers and four new towns. In Home Economics Education the mother training and nutrition classes have made the greatest percentage of increase in enrollment.

A new piece of work, organized in Omaha, 1927-28, was to conduct evening classes in home-making, which were attended by men and women. There have been five such classes with fifty men and women in very regular attendance.[54]

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[53] Excerpt from letter sent to the Yearbook Committee by State Supervisor of Home Economics, Oklahoma.

[54] The report of the work in Nebraska was made from recent reports of the supervisors to the Yearbook Committee and from *Vocational Education,* Vol. I, No. 6, July 1926, (State Board for Vocational Education, Lincoln, Nebraska).

8. State Department of Education

a. California. In 1926 when plans were made for a child study and parent program in the State Department of Education of California, it seemed that the most feasible arrangement was to add these courses to the already well-organized Division of Adult Education, since this was the one from which the people were accustomed to expect educational opportunities. Thus the Bureau of Child Study and Parent Education was organized as part of the Division of Adult Education, with the director of the Institute for Child Study at the University of California as its chief. The purposes of the program are: (1) to present to parents in nontechnical language the opinions of recognized experts in the field of child study; (2) to afford parents the opportunity for directed practice in the analysis of the common problems connected with child development and child behavior and opportunity for directed practice in the application of generalized information to concrete situations; and (3) to afford parents the opportunity for the direct observation of young children in a child-study laboratory.

These study groups are organized through the coöperation of already existing organizations whose membership and aims indicate that they will be interested in this branch of adult education, such as the California Congress of Mothers and Parent-Teacher Association, Federated Women's Clubs, and the American Association of University Women.

It is necessary for the leader of the study group to be at least twenty-five years old and to hold a special teaching credential in "Child Study and Parent Education."[55]

During 1927-28, when two full-time specialists in child study were placed on the staff, sixty classes were organized. Of these sixty, thirty-eight are in the larger cities, Los Angeles, Long Beach, Pasadena, Fresno, San Francisco, Oakland, Berkeley, Sacramento, and Stockton. The other classes are scattered in towns and rural districts. The leaders vary: some are local people; others are specialists. A number of classes have been organized for fathers.[56]

[55] State Department of Education, Bureau of Child Study and Parent Education, Sacramento, California. Bulletin No. 1, April 5, 1927. "Information concerning the organization and maintenance of groups for child study and parent education as part of the public school system of California."

[56] From report sent to Yearbook Committee by Chief, Bureau of Child Study and Parent Education, Division of Adult Education, California State Department of Education.

9. Local Public School Systems

The idea that a public school system may be of further service to the community than through just the regular day school is being commonly accepted. There are any number of facilities that may be extended to the members of the community and especially to the adult population by slight adjustments in the school system. A parental education program is one such additional service that may be incorporated into the program of a socialized public-school system. The experiments of the State Department of Vocational Education in Oklahoma and Nebraska, and the Division of Adult Education, California State Department of Education, are public school ventures into the field of parental education.[57] There are other school systems that are experimenting with various methods whereby a parental education program may be organized in a public-school system. Council Bluffs and Des Moines, Iowa, and Cleveland, Ohio, may have a few suggestions to offer in the near future, since experiments are being made in these cities.

a. Iowa. As a part of the state-wide program for child study and parental education directed by the Iowa Child Welfare Research Station[58] two experiments were organized September, 1925, in two public schools in the state, namely, Des Moines and Council Bluffs. The objectives of the experiment, as stated in a report of the Iowa Child Welfare Research, 1925-26, are as follows:

> The aim in each of the two cities, Des Moines and Council Bluffs, has been to set up an experimental laboratory problem in coöperation with the school board in order to determine the best methods of stimulating and directing parents in the field of parent education.
>
> Some of the specific aims of the field laboratory workers are: to determine how far parents will study their own children and how best to accomplish this end; to determine whether parent training can be directly coördinated with the public schools through the board of education, superintendent, teachers, and parent organizations; to formulate a method for introducing parent education into a city school system; and to work out an administrative method of conducting such work so as to determine as far as possible the cost to the community.

At Des Moines the kindergarten supervisor was released for part time to direct the program. The work seems to be restricted,

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[57] See elsewhere in this chapter.
[58] See earlier in this chapter.

unintentionally however, to parents of preschool children. The Parent-Teacher Association organized the study circles, made a survey of preschool children, held clinics, etc. The discussion groups are led by local women who are members of a class for leaders in charge of the director.

At Council Bluffs a director of child study and parental education was given a full-time position on the staff of the public-school system. She has organized and directed the groups, which are largely composed of the parents of children in the elementary grade. For the last two years she was given a part-time assistant and has held a class for training leaders, who will be able to continue and expand the program.

b. Cleveland, Ohio. In the fall of 1926 the Board of Education undertook an experiment in parental education to determine whether parents in Cleveland desired to have provisions made for assisting them in improving their methods of dealing with children. The dean of the School of Education of Western Reserve University is director of the parental education program. The work is under the immediate supervision of a field worker. During the first year the experiment was confined to one school group in order to obtain information about the kind of materials desired by parents and the best way of presenting them. During 1927-28 six study groups were conducted by volunteer leaders. Local leaders are being trained by special supervision and summer courses.

Since the program is wholly experimental and largely exploratory, the workers have been confined to the use of such techniques as could be used to determine the needs of parents; the methods most fruitful in use; and materials available for use of parents and group leaders.

10. Private Schools

Many of the modern private schools have been established on the initiative of parents who desired to give their children special educational opportunities. Owing to this fact the directing board is often composed of parents. Such schools have in many cases developed extensive programs for the education of the parents of the children in the school. These programs usually have a threefold aim: to keep parents informed as to the policies and program of the school, to help parents understand the developmental needs

of their children, and to help both teachers and parents more fully to understand individual children and the specific problems of adjustment and education which they may present. Increasingly an emphasis has been placed upon the value of an interchange of knowledge and experience between parents and teachers.[59] It is impossible to review all of the work which is being done, but the work of a few schools will be presented as examples.[60]

a. Ethical Culture School, New York City. This school has a Parent-Teacher Association which initiates and develops most of the parental education projects. There are two annual meetings, the one in the fall for the presentation of the aims and ideals of the school. There are several different types of study groups organized on the basis of various aspects of child life to be studied, the grade in which the children are located, including fathers' groups, and so forth. A course is given for nurses and governesses. A quarterly magazine and handbook are published. The group also has undertaken such projects as planning for afternoon recreation for the children or providing school excursions which later have been taken over by the school. Through such a varied program the responsibility of both parents for the improvement of the school and the home through a better mutual understanding is increased.

b. Tower Hill School, Wilmington, Delaware.[61] In common with other modern schools that believe in the unity of a child's growth, Tower Hill School has considered parental education as one of its chief functions. The work of enlisting the active and enthusiastic coöperation of parents in the education and training of their children has three principal phases: (1) Frequent grade conferences between parents and teachers, so that the new procedure of the school may be understood and given suitable support at home. These conferences are informally organized with a parent as chairman. (2) The activities, both social and instructive, of the parent-teacher group as a whole, such as lectures, dinners, and affairs of the "father and son" type. (3) The child study groups, representative of such common interests as the nursery,

[59] See discussion in Ch. IX.

[60] An interesting group discussion on "The relation of parents to progressive schools" was held at the meeting of the Progressive Education Association in New York City, March, 1928. A report of this conference is given in *Progressive Education*, July, 1925, 274-6.

[61] Report written by the headmaster of the school for the Yearbook.

primary, preadolescent, and adolescent stages. These groups have their headquarters at the school, and, as far as possible, are conducted by experienced leaders. Each year the child-study courses are inaugurated by a well-known leader in this field who assists in the work of organization and gives the whole plan impetus by an inspiring talk. A feature of special interest is the dinners for the fathers, representing various age groups.

A most valuable feature of the whole plan is the maintenance on the staff of a psychologist to administer tests, to consult with parents, and to study individual children.

c. The North Shore Country Day School, Winnetka, Illinois.[62] The Parents Association of the North Shore Country Day School is organized primarily for the parents and not for the teachers or the students. The principal aim of the Association is to educate the parents to a better understanding of their position in the scheme of education of their children's lives.

The Association functions with a president and an executive committee of eleven people who guide the work of the thirteen subgroups, one for each grade in the school. Either the chairman or vice-chairman in each of the groups must be a father. This rule was made at the request of the fathers. Meetings must be held at times when fathers can come, except for occasional mothers' meetings to make costumes and attend to matters of that type.

The meetings have fallen into three classes. First, meetings of a distinctly social nature in which the parents attempt to come into social contact with each other and with their children so that they more fully may understand the problem of the grade by knowing the parents and the children in the grade. Second, meetings devoted to child study in which the parents undertake to study their jobs professionally. These meetings consist of book reviews, discussions of such matters as discipline, reading, homework, etc., and, occasionally, lectures by some person connected with the grade (either a parent or a teacher) who is an expert in some field, such as a neurologist, a librarian, and so on. Third, meetings for the purpose of taking up some problem which is particularly important to a specific group of children in the school, which is not necessarily a problem in general child psychology. This type of meet-

[62] From a report to the Yearbook Committee from the headmaster of the school.

ing also includes becoming better acquainted with the school and learning what its plan of work is. At this meeting frequently the parents will listen to an outline of a course of study for the entire year in a subject such as mathematics, dramatics, or music.

Most of the work is done through small grade groups, each of which meets on an average of five or six times a year. In addition to this there are three large meetings of the association as a whole. One is held at the beginning of the year, in which the grade groups are organized, and plans of study and programs for the year are decided upon. At this meeting the headmaster usually gives a short talk on the principles of the school, and the need of the school for help from the Parents Association in better understanding of the children and the school. There is one meeting in the middle of the year in which some prominent person speaks. In the spring the executive committee calls a meeting of the heads of each of the grade groups. Each grade chairman is required to report very fully on the work which his or her grade has done that year. The chairmen are than quizzed on their reports, and recommendations are made. This meeting, calling to account the grade chairmen, has done a tremendous amount of good.

In addition to these meetings, the mothers and fathers take part in the life of the school vitally. A committee of mothers acts as hostesses. Two members come each day to the school office and receive guests. It is the business of this committee to acquaint itself with the running machinery of the school and to understand thoroughly the principles which are back of the school. One mother is on duty in the office, the other is visiting the school's various departments to learn more intimately about it. Other committees take definite responsibilities in the library, the lunch room, in costume making, and so forth.

11. Nursery Schools

Directors of nursery schools and others interested in the nursery school movement maintain that the organization of a nursery school is not justifiable unless accompanied by a program for the education of the parents of the children enrolled in the school. This thesis is held because of the necessity of integration and continuity in the education of young children. Both teachers and parents need to interchange information in order that each may have a

complete picture of the child's life during the twenty-four hours of each day. Furthermore, in order that the child may develop a wholesome personality there should be a minimal amount of changing demands and different standards for his behavior. Unless school and home coöperate, the child may be led to build up two separate groups of behavior habits, each suited to the standards required. Teachers and parents must each adjust in order to work out routine programs and standards of behavior in home and nursery school which have continuity and supplement each other.

The nursery school affords a number of splendid opportunities for parental education. It may become, under proper guidance, a laboratory in which parents may study their own children objectively and comparatively.

Because of the underlying philosophy and the opportunities which the nursery school offers, there are few nursery schools that do not consider the education of parents as an integral part of their program. These may range from a restricted program for the small group of parents associated with the school to a comprehensive organization that by various methods serves a large number of people interested in the welfare of children for an almost unlimited territory.

Besides the formal lectures or discussion groups supplemented by bibliographies and library facilities which are the usual procedure, other opportunities are offered for parental education, such as interviews and consultations with the various staff members, directed observation of children in school and home, coöperation with records of habits, activities, and development of children, and assistance of the mother in the school.[63]

The nursery school may also serve as a means of training leaders for parent groups, for it gives opportunity to study the problems arising out of the parent-child relationship; to observe, under direction, the development of children, and to gain experience in meeting the problems of organization and direction of discussion groups for parents by participating in, and observing, parents' classes. At several centers where courses in parental education are offered, the nursery-school experience is required. A number of

[63] A more complete discussion will be found in "The nursery school as a center for parent education," Lois Hayden Meek. *Childhood Education,* January, 1928.

centers even make this a requisite in a more or less limited degree, for the training of the volunteer, lay, or non-professional leaders of parents' classes.

Since Chapter VIII of the Yearbook is devoted to a discussion of nursery schools, only one detailed report of the parental education work in a specific nursery school will be given here. The reports of the fourteen nursery schools in Chapter VIII show very plainly that the education of parents is a phase of their program no less important than the education of the children themselves. Indeed, indirectly it is a part of the latter.

Reference is here given to discussions of parental education work in nursery schools which appear in other sections of the Yearbook.

a. Nursery Schools in Centers of Research. The centers for research in child welfare have all established nursery schools. These centers are developing intensive programs for the parents of the children in the nursery schools. For a discussion of this work, see the second section of this chapter (especially Merrill-Palmer School). Also in Chapter VIII reports are given of the parental education done in the nursery schools of University of Iowa, Teachers College, Columbia University, Yale Guidance Nursery, and Merrill-Palmer School.

b. Assisting Mothers. In several places groups of children have been organized by mothers in order to give their children better play facilities and in order that they themselves might learn more about children.

In such nursery-school experiments the mothers are usually active participants in the daily routine of the nursery-school program. The Cambridge Nursery School, the Smith College Coöperative Nursery School, and the Chicago Coöperative Nursery School are such organizations.

One other experiment of this type is the Children's Community at Berkeley, California. A group of women, members of the American Association of University Women, had been studying preschool education for several years together. With the opening of the Institute for Child Study and Parent Education at the University of California they were ready for more advanced work. Under the guidance of the Institute they continued their study and organized a playgroup for their children. This "Children's Com-

munity," as it was called, became a laboratory not only for study but also for trying some of the theories and methods which had been discussed. It gave them an opportunity for learning through practice. The plans for the community were made by the parents with the advice of the institute. The work of selecting a site, securing equipment and materials, indeed all the actual executing of the project, was done by the parents. The institute paid the salary of a trained nursery-school teacher for one year. This enabled the mothers to have expert guidance at first. Beginning in the fall of 1928 the mothers are to carry full responsibility.

c. Work in Settlement Districts. The giving of proper care to preschool children of working mothers has been found to be a very real problem. Many social measures are being tried to improve home conditions and home care of these children. Better housing,[64] mothers' pensions, the probation systems in court, and day nurseries[65] are some of the most outstanding. More recently, however, there is a growing tendency towards establishing nursery schools as centers for parent and child education.

However, it is one thing to give the children a healthful educative environment during the hours they are in the nursery school and quite another thing so to educate their parents that this régime will be carried over into the home. To further parental education with mothers who work all day in a factory and carry home responsibilities in the early mornings and evenings is a challenging problem. The reports of the Gowan and Samantha Hanna Nursery Schools in Cleveland, the Boston Training School, and the Mary Crane Nursery School in Chicago, give encouraging evidence that it can be done. The adaptation of usual methods of parent education to their specific situations are significant.

d. Cornell Nursery School. The nursery school of the New York State College of Home Economics at Cornell University[66] has not been reported elsewhere in the Yearbook. A survey of the work they are doing in parental education will be found to be similar to the work in other well-equipped nursery schools. The resident parent education may be considered under three groups: conferences, observation, and records.

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[64] See Ch. III.

[65] See Ch. V for a discussion of social conditions due to employment of mothers in industry and the relation of the day nursery to this situation.

[66] For a discussion of the preparental program at Cornell, see Ch. XI.

(1) Conferences: When the child is enrolled in the nursery school, there are initial interviews with parents. These are held by the physician, nutritionist, psychologist, and teaching staff. This gives the staff valuable information about the child, his home, and his family. It also brings to the surface the problems of the parent in child guidance. On the basis of these interviews tentative recommendations are made. Further conferences about these problems and recommendations are arranged frequently until there is solution.

Daily conferences with parents are possible when the child is brought to the nursery school in the morning and called for in the afternoon. Parent meetings for both fathers and mothers are held once a month when problems of a general nature are taken up and discussed. The nursery school has served also, to the greatest extent possible with its present staff, somewhat informally as a clinic center where parents other than those enrolled may bring their problems.

(2) Observation: Each father and mother has spent full days in the nursery school observing their child, his behavior, and his guidance by experts. Conferences have followed these observations.

(3) Records: Daily and periodical records have been kept by the parents throughout the year, giving the staff information about the child's food, rest, play, elimination, disturbances of any sort, etc. Daily records have been kept by the staff on these same matters and sent to the home daily. This mutual give-and-take of records makes conferences with parents concrete and to the point, with the result that both home and school better meet the child's needs.[67]

12. Social Agencies

In certain communities parental education has been furthered by social rather than educational agencies. These agencies are engaged not only in programs of social relief but also in building better standards of living and social ideals among the children and adults with whom they work. Education of parents has been undertaken in most cases in an effort to carry into the home methods of child care and training similar to that given to the

[67] From a recent report to the Yearbook Committee by the director.

children when under the supervision of the social agency. A continuity of home, school, and community interest is but justice to the child and parent.

There are other considerations that are commonly emphasized in the early organization of parental education programs among social agencies but they are secondary in importance to the objective of continuity in education. Such considerations are: (1) the advantages of coöperation and coördination of this program with the already well-established child-welfare institutions in a community rather than the introduction of it as a new and independent project; (2) the idea of a positive, preventive, and educational service associated with relief, recreational, protective, or clinical agencies; (3) the extension of this service to all groups, whether dependent, delinquent, and remedial or not; and (4) provision for the staff members of these various organizations to receive this training.

Many in the professional group are as much in need of education in regard to the newer ideas of child development as are the parents. Thus, courses with special reference to teachers, nurses, social workers, directors of day nurseries, and others have been arranged.[68]

In several places the child-study courses were sponsored by groups of parents who felt that, even though their children presented no immediate problems, the information gleaned from the case studies of the various social agencies might be of value as a preventive measure in their family and community life. Such demands were made especially from juvenile courts and child guidance clinics.

Some of these programs are financed by the community chest or other civic funds, others by private subscription or by a fee charged for the course. A few depend entirely upon volunteer service.

There are a number of these sporadic attempts that are worthy of detailed discussion, but in this brief survey it is necessary to select a few of the organizations that have prepared programs which may be adapted to function in most communities. These community agencies are attempting by united efforts "to develop

[68] As by the Child Training Committee, Children's Conference of Cleveland, the Parents Council, Philadelphia, and McGill University.

a concept of parent education through child study as a community undertaking that is greater than any one organization's capacity but dependent upon the efforts of each.''[69]

a. The Children's Bureau of Kansas City, Missouri.[70] This bureau is an outgrowth of the Child Welfare Division of the Council of National Defence. The first examination of children from birth to six years of age, held in 1918 at the request of the Federal Children's Bureau, was a part of the program of the council. It revealed so many physical defects that the Child Welfare Division decided to make it an annual affair. At the close of the war, when the council was disbanded, the work was reorganized under a trustee board with the present name. It is the volunteer service of the members of civic, social, and educational organizations of the city that makes possible the continuance of the work. There are four paid workers and about 3000 volunteers trained by the executive secretary. The volunteers are selected by the bureau and classified according to the service each can render. Many have served the full term of the bureau's life. Complete physical examinations by child specialists are open annually to every child under six years of age. Over 20,000 were examined in 1927-28, and 900 defects were corrected. Well-Children's Stations are open to such children weekly, and much instruction in care and training is given their mothers. Over 1000 parents attended the classes on the physical care and the training of children, carried on by the bureau, and 600 high-school students heard a group of talks on preschool training. Class speakers specially trained in weekly sessions carry out a systematized program in these bimonthly classes.

b. The Child Training Committee of Cleveland, Ohio. The Child Training Committee of the Children's Conference is a project of the Cleveland Community Chest. The Children's Conference is a representative group of the child welfare agencies in the city and works toward a coördinated program of their activities. For a number of years a small group realized the need for a program for parents and had made a number of sporadic experiments to demonstrate the possibilities in this field. No unified effort was

[69] Quotation from mimeographed outline, Iowa State Council of Child Study and Parent Education, Iowa Child Welfare Research Station.

[70] From a report written by the Bureau for the Yearbook.

made to promote such a program, however, until February, 1927, when a class was organized for the training of leaders for child-study groups as an extension course of the School of Applied Social Sciences, Western Reserve University.[71]

The aims of the Child Training Committee are: to supply leaders for groups interested in parent education, to make available at small cost numerous pamphlets useful in group discussion, to develop properly qualified leaders through resources for training available, to offer opportunities for exchange of experience on the part of leaders and groups, and to help coördinate efforts at parental education in Cleveland.

To this end the Committee conducts discussion groups for expectant mothers, parents of preschool and school-age children. These groups meet each week over a period of ten or twelve weeks. A series of talks, combined with discussion, is also conducted.

The committee coöperates with Cleveland College in the courses in parental education by assisting in a publicity program to bring before the community the opportunities offered by the Division of Parental Education, Cleveland College, Western Reserve University. Other agencies with whom the committee coöperates are the Red Cross Teaching Center, the Prenatal Education Committee of the Cleveland Health Council, Parent-Teacher Associations, church organizations and social service agencies.[72]

c. The Institute for Juvenile Research, Chicago, Illinois.[73] The Institute is devoted to the study and treatment of behavior problems of children. It seeks to aid parents, teachers, and social agencies in the better understanding and development of each particular child. The Institute for Juvenile Research is a development of the Juvenile Psychopathic Institute, started under private auspices in 1909, to act in an advisory capacity to the Judges of the Juvenile Court of Cook County with the principal object of discovering the sources of delinquency and method of prevention.

From this small beginning the Institute has expanded its work until now its services are demanded throughout the state. To-day the Institute furnishes full-unit staffs to coöperate with nine sep-

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[71] See the fourth section of this chapter.

[72] Excerpts from the leaflet, *Guide Posts for Child Training,* published by the Child Training Committee of Cleveland.

[73] Excerpts from the *Tenth Annual Report of the Criminologist* (July 1, 1926-June 30, 1927). Department of Public Welfare, Springfield, Illinois.

arate family welfare organizations in fourteen cities, with several down-state schools, as well as with five different clinics in Chicago. The Institute renders additional services to many parts of the state by sending individual psychologists, psychiatrists, and psychiatric social workers to give specialized help where full-unit service is not essential.

The Preschool Branch of the Institute, established January, 1926, is one of the research projects made possible by the Behavior Research Fund. The unit was established with the combined objectives of service and research, carrying on its work through the agencies already existing in the community.

It was hoped that this type of organization might prove sufficiently effective to encourage coöperative organization in similar work in other communities. The aim of the Preschool Branch is thus to make, through coöperative efforts, a complete personality study of the child, to give recommendations for the treatment of problems which may appear, and also to use for research the data thus collected.

Though the Institute does not have an organized program of parental education, the education of the parent is involved in all its case work. In addition to constant interviews with the individual parent members of the Institute, the staff gives many lectures to lay groups and assists in the planning of study programs of various child-study groups.

d. Judge Baker Foundation, Boston, Massachusetts. The Judge Baker Foundation, organized April 1, 1917, as an independent organization maintained by subscription, is an educational and charitable organization with no official connection with any other agency.

In the beginning it was unofficially attached to the Boston Juvenile Court as a study department of problem children coming into that court. Its other purposes were to gather scientific information in regard to problems of children and young people, initiate and carry on research, and other related work. During the years of its growth it has broadened the scope, not from the court, but from various social agencies dealing with young people between the ages of six and eighteen. It studies not only behavior problems, but those of personality and of an educational and vocational nature. It is also used for training of psychiatrists, psychologists, and social workers. It endeavors also to work with parents, helping them to understand causes of the difficulties which they and their children present, and methods of meeting them,

although it is largely a diagnostic agency passing on advice and recommendations to courts and other social agencies. One large feature of the work is continuous follow-up study of cases, part of which is obtained from field workers through visiting in the homes, and some by conferences with teachers, social workers, and other groups interested in the cases.

From the beginning some research has been carried on. These deal with problems of child training, juvenile delinquency, mental tests, methods of case study, and child guidance work, etc.[74]

e. Juvenile Courts. In a number of cities judges and referees of juvenile courts, probation officers, and others interested in juvenile delinquency realized that the usual court procedure was only a small part of the service that a juvenile court could render to a community. Research and educational programs, consultation, and other services were necessary for the officials to deal adequately with the many delinquency problems, for the community to have an intelligent understanding of the assistance it must give to the early offender for his reinstatement into society, and for both the officials and members of the community to carry out a preventive program.

(1) Chicago made one of the first attempts to provide such a service in 1909 when the Juvenile Psychopathic Institute was organized. This later developed into the Division of Criminology of the State Department of Public Welfare with the Institute of Juvenile Research[75] as its official agency in a preventive program.

(2) The first judge of the Juvenile Court in Boston saw the valuable aid given the juvenile delinquents in Chicago and expressed a fervent hope that Boston, too, might have this service. Accordingly, in 1917, the Judge Baker Foundation was incorporated as a memorial and a realization of this wish.[76]

(3) In Denver the service of the Juvenile Court was extended to the community through a consultation service. This was available to children and parents in difficulty, whether or not an offender of the law. Individuals from all classes of society were served. The first statutory attempt to make parent education a definite part of an educational system was in Colorado.

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[74] From a recent informal report to the Yearbook Committee from the Judge Baker Foundation.

[75] Described elsewhere under "Social Agencies, Institute of Juvenile Research."

[76] Described earlier in this chapter.

(4) In Detroit the parental education program of the Juvenile Court was organized for the Mothers' Pension group. In Michigan the Mothers' Pension Law was enacted as a remedy for dependency and for the prevention of delinquency. The administration is placed in the Juvenile Division of the Probate Court and delegated by the Judge of the Juvenile Court to a referee, who is also the Chief Probation Officer.

There were in 1926, 1160 mothers drawing Mothers' Pension in Wayne County, representing every class of society from the college graduate to the most ignorant peasant from a foreign land. Sixty-five percent of these families had never been dependent or known to any social agency prior to the death or removal of the father.

The educational program for these mothers covers the entire scope of home life. If the mother has difficulty in handling her financial matters, the budget upon which her pension is based is explained to her. Careful instruction is given in the management of her property, and in the opening and using of bank accounts when there is insurance money to be invested. She is given instruction in the simpler phases of child training. If expert advice is needed, she is referred to the Wayne County Psychopathic Clinic. She is helped to develop a program of recreation for herself and her family and is taught to watch and safeguard her own health and the health of her children.

(5) At Los Angeles the referee of the Juvenile Court has supervised a research and a parental education program. The study of case histories of adolescent girls and boys as delinquents and normal members of society is presented in Miriam Van Waters' *Youth in Conflict* and *Parents on Probation.*[77]

A group of young women, most of whom were mothers, studied with the referee on delinquency problems and their solutions, and the contribution of home, school, and communities to cause and cure. These women served as leaders of child-study groups in civic and social welfare organizations, assisted with the Conference on Modern Parenthood held in Los Angeles, December, 1926, and attempted to interpret the functions of the court and the responsibility of the community to the delinquent.

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[77] *Youth in Conflict,* New York: New Republic, 1925. *Parents on Probation,* New York: New Republic, 1927.

f. The Monmouth County Organization for Social Service at Red Bank, New Jersey. The Monmouth County Organization for Social Service is a private organization that is making an effort to coördinate all the public and private welfare agencies in the county.

In January, 1924, the Organization enlarged its preventive and educational program to develop parent education in connection with a child-guidance clinic. This was a direct outgrowth of a mobile psychiatric clinic for children, which had operated in the county since 1921.

This later program of the child-guidance clinic was organized in three divisions: the training for leadership in parental education, preventive work or habit clinics, and the organization of child-study groups for parents, teachers, and all who have contact with children. For the training of leaders, classes in the study of child development and clinical methods are given. Credit is granted by the School of Education, Teachers College, Columbia University, for certain classes that meet the necessary requirements. Very close integration of the child-study and nursing program has been effected. Many public health nurses have attended these classes and are now organizing, and in some cases directing, child-study groups.

For the last two years the primary aim of the parental education program has been to develop lay leaders who will continue the program without professional supervision.

Affiliation was made with the extension department of Rutgers College. The Child Study Association of America has also coöperated with this program.[78]

g. Parents' Council of Philadelphia. The Parents' Council is one of the efforts to coördinate the child-welfare interests in a city toward a preventive program. The Council existed for a number of years as a volunteer organization. A group of lay men and women, and physicians, social workers, and educators realized the need for a program for parents and for the affiliation of the various agencies interested in children. The Council, reorganized with a professional director and a number of trained assistants, launched upon the present program in October, 1926.

[78] A detailed account of this program is given in the annual reports of the Monmouth County Organization for Social Service. These may be secured from the executive secretary, Red Bank, N. J.

The Council conducts child-study groups in many parts of the city for parents of normal families. Members are enrolled in groups according to their special interest in infants, preschool, young, or adolescent children. Individual conferences are also provided for members. Groups are also formed to develop leaders to work with affiliated organizations.

During the past winter and spring 913 fathers and mothers have been members of 47 child-study groups meeting weekly or semi-monthly.

Some of these groups have enrolled fathers and mothers registering together, others mothers, and a few, mothers and teachers. Of special interest were groups conducted for housekeepers sent by the Visiting Housekeepers' Bureau to substitute for mothers temporarily incapacitated, for orphanage house mothers, for day-nursery heads and other workers with children, and for mothers who bring children for examination to public-health centers.

It is significant that of these forty-seven groups, forty-three were initiated and organized by individuals in the community, by churches, synagogues, parent-teacher associations, public and private schools, health centers, and women's clubs who came to us for professional leadership.[79]

The Council as such does not educate students, but it coöperates with the Pennsylvania School for Social and Health Work by training those who are already experienced in social work for study-group leadership. All groups are led only by professionally trained leaders, who, while they are working, meet regularly with the Pennsylvania School staff to discuss personality and home relationship problems.

h. The Women's Coöperative Alliance. The Women's Coöperative Alliance was organized by a group of women's organizations in Minneapolis, Minnesota, in 1914, for the purpose of securing protection for children and young people in matters affecting public morals. The Alliance is unique in that it devotes practically all of its efforts to the education of mothers in the methods of educating their own children in matters pertaining to sex. It also includes the related subjects of protective measures for women and children and supervised recreation and health.

The Alliance has been quite persistent in its stand that information on sex education should be given to parents, who in turn should give it to the children.

[79] Director's Report, Parent's Council of Philadelphia, year ending April 30, 1928.

The Department of Parent Education provides for early sex education in the home with parents as teachers. It aims to develop or encourage wholesome attitudes toward the consideration of family relationships; to anticipate normal curiosity; and to prevent unwholesome experimentation among children. It furnishes facts concerning sex social relationships to parents for children, and gives special emphasis to the graded subject materials, methods, and techniques of using them.[80]

In the last few years emphasis has been placed upon work with mothers of children from preschool up to junior-high-school years. Parent advisers go from house to house in a given district making contacts with mothers, discussing with them the need for sex education, and leaving behind pertinent pamphlets and leaflets. Later visits are made to follow up this individual education and to encourage the mothers to join groups for study and discussion.

Lectures and courses in social hygiene are given to groups organized by other agencies.[81]

The agencies given consideration heretofore in this discussion have initiated or sponsored parental education programs that have emphasized the preventive aspects of child life. There are, however, a number of agencies that are purposefully organized to assist the parent and the child in a remedial program, such as the child guidance clinics, the visiting teacher program, and the public health organizations. This does not imply, however, that the activities of these agencies are restricted to a remedial program only.

13. Child Guidance Clinics and the Visiting Teacher Program

The child-guidance clinic and the visiting teacher are two agencies which have been established in order to serve families where children have had difficulties in making adjustments. A rather comprehensive discussion of the clinic as a means for re-education of children and parents is given in Chapter VII.

a. Child-Guidance Clinic. Demonstrations of child-guidance clinics and of visiting teachers have been conducted in a number of cities in the United States under the direction of the Joint Com-

[80] Description of the Program of Early Sex Education in the Home, Dept. of Parent Education of the Women's Coöperative Alliance, by Catheryne Cooke Gilman. Women's Coöperative Alliance, Inc., 212 Citizens Building, Minneapolis, Minn.

[81] For a full account of the program, see reference in footnote 80.

mittee for the Prevention of Delinquency of the National Committee for Mental Hygiene.[82]

Community child-guidance clinics have been established as one of the agencies in the social welfare program in a number of cities. These function through the school, juvenile court, orphanages, and other child-welfare agencies in the city and are financed by public and private funds. In Illinois through the Institute of Juvenile Research a number of community clinics have been organized as branches of the Institute in several cities.

These clinics use the individual and consultation method in working with parents rather than the group-discussion method. A series of public lectures may be given by the specialists of the clinic. In a number of cities an organized course of study for parents developed as a result of a child-guidance clinic in the community. The stimulus for these courses oftentimes comes from the parents whose children were not referred to the clinic but who realized that the clinic had a wealth of material, which, when interpreted, would be most helpful to parents. Whether or not they had an immediate problem, it might serve to avoid a crisis later in their life.

In the field of mental hygiene, as in other phases of child development, there is a need for further means of study and research and adequate facilities for training. In order that such a service might be rendered, the Institute for Child Guidance, New York City, was reorganized to replace the Bureau of Child Guidance, July 1, 1927. Its program is outlined briefly as follows:

"To make possible further study and research in the field of mental hygiene for children; to provide clinical facilities for the training of psychiatrists, psychologists, and psychiatric social workers in practical child-guidance work; and to offer additional clinical facilities for the thorough study and treatment of children presenting problems in behavior."[83]

b. The Visiting Teacher. The visiting teacher program is an effort to reach the children whose school progress or behavior under normal requirements points toward inefficiency, delinquency,

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[82] *Eighth Annual Report, Commonwealth Fund,* 1926, pp. 33-40 (1 East 57th Street, New York City).

[83] For further discussion, see 1926-1927 *Annual Report of the Commonwealth Fund.*

or other types of personal or social mal-adjustment.[84] It is the visiting teacher's responsibility to study such children, to study the provisions of home, school, and neighborhood in an effort to set up a program for reeducation of the child. This usually means close coöperation with parents and a parental education program. The work with parents is done through personal contacts and visits to the home.

"In the homes the visiting teacher frequently assumes the rôle of interpreter, explaining away misunderstanding about school requirements, interpreting the school's aims and demands and the child's needs. When these are realized, the parents give their cooperation to the school with a quickened sense of responsibility and a clearer vision of their duty. Many times the visiting teacher finds herself faced with the task of giving, in the simplest possible form, lessons in habit-formation and child psychology. She has frequently to interpret to the children the attitude of their conservative parents."[85]

Three-year demonstrations of visiting teaching have been conducted by the Commonwealth Fund in thirty communities located in twenty-three states of the Union.

14. Health Agencies

The public health programs initiated by public and private organizations, national, federal, state, county, and city, offer remedial and educational services to children and adults, particularly to parents as individuals and as members of the community. The major interest of the health agencies was originally remedial. Later, as the program expanded, a preventive or educational service was evolved and as great an effort was put forth to keep the well babies healthy as to cure those that were ill and defective. Maternity and infant welfare centers and their activities in the education of parents are treated in Chapter VI. Health clinics are discussed in Chapter VII.

For some time the directors of health-education programs have realized the limitations of their activities in considering the physical

[84] For description of the visiting teacher work, see *The Problem Child in School*, by Mary Sayles. New York: Joint Committee on Methods of Preventing Delinquency, pp. 253-280.

[85] From *The Visiting Teacher*, by Jane F. Culbert, Joint Committee on Methods of Preventing Delinquency.

care of the child only, and have seen the need for the correlation of the physical with the mental, emotional, and social developments of the child. Moreover, many health-education programs are beginning to stress the part parents play in the teaching of health habits. A few of the efforts to incorporate a complete picture of the development of the child and to emphasize the education of the parent in a public health program are here mentioned briefly.

a. Federal Public Health Agencies.

(1) The United States Public Health Service.[86] The Child Hygiene Office of the United States Public Health Service has a series of letters of advice to expectant mothers which are sent free of cost to any person desiring information of this character. A mailing list is maintained in the office, and letters are sent, one each month, calling attention to particular precautions to be taken at the different stages of pregnancy. The information contained in these letters is intended to supplement the advice of the family physician. During the past year an average of between eight and nine hundred letters was sent out each month, and more than ten thousand were sent during the year.

The Office writes a personal letter in answer to questions relating to special problems in childhood. A booklet on the care of the baby, literature relating to the nutrition of children, diseases common in childhood, and information on sex hygiene are also distributed.

(2) The United States Children's Bureau.[87] With the passing of the act for the promotion of the welfare and hygiene of maternity and infancy, popularly known as the Sheppard-Towner Act, in 1921, the most extensive program ever arranged for the education of parents in the scientific care of children was inaugurated. The administration of this program was given to the Children's Bureau of the United States Department of Labor in coöperation with the Bureaus of Child Hygiene organized in each state under the provision of the acts.

Though the development of the program in each state was left largely to the state agency directing the work within the state, the

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[86] Report to the Yearbook Committee from the United States Public Health Service.

[87] The data for this report and the report on State Bureaus of Child Hygiene was supplied by the Children's Bureau and by Children's Bureau Publications Nos. 178 and 186.

Children's Bureau made a special effort to see that its services were made available to the people of the smaller cities, towns, villages, and the rural districts. The larger cities usually have well-developed health departments that function separately from the state department. The need for the extension of maternity and infancy work to the less populous districts was apparent.

The Federal staff acts in an advisory capacity to the states if requested to do so. In several instances members of the Federal staff have spent a number of months in a state, making surveys, conducting child health conferences, assisting in setting up a demonstration center, and directing special classes for mothers, midwives, physicians, and other public health workers.

One of the most valuable services the Federal and State Bureaus have made is the preparation and the dissemination of literature on phases of infant care and hygiene, child care and management, maternal care, and the fundamental features of the work.

The Children's Bureau also is conducting research on various phases of child hygiene, such as rickets, breast feeding, status of maternal mortality, standards of prenatal care, and related subjects.

The appropriation which provided for federal aid to the states was originally for a five-year period. Congress in 1927 authorized a two-year extension of the federal aid, which continues it to June 30, 1929.[88]

b. State Public Health Service.

(1) Bureaus of Child Hygiene. Through the Bureaus of Child Hygiene organized in the State Departments of Public Health or Public Welfare[89] the Children's Bureau has been able to extend the services provided by the Sheppard-Towner Act to parents in all parts of the United States, although the benefits of this act were only available to the states in which the state legislature made possible its acceptance by the appropriation of state funds to match federal funds and designated or authorized for the creation of a state agency to coöperate with the Children's Bureau. At the close

[88] For further discussion of this program and the text of the law, see the annual reports of the Administration of the Act of Congress of November 23, 1921. (Publications No. 137, No. 145, No. 156, No. 178, and No. 186, Children's Bureau.)

[89] Colorado and Iowa are the only exceptions. In these states, the State Departments of Public Instruction, and the Extension Service of the State University, respectively, direct the program.

of the fiscal year, June 30, 1927, all states except three—Connecticut, Illinois, and Massachusetts—were coöperating.

The act leaves to the individual states the initiation and carrying out of their own plans of work as well as the appointment of personnel. The state plans must be approved by the Federal Board of Maternity and Infant Hygiene[90] if they are reasonably appropriate and adequate to carry out the purposes of the act.

The work is directed mainly to the physical care of expectant mothers and infants, but it has been a fact well-recognized by the administrators of the work, both in the Children's Bureau and in the states, that good hygiene can not be carried forward without attention to habit-training and to the management of children. Consequently, all educational work to further the welfare and hygiene of infants and preschool children has included instruction to parents in child guidance, as well as in the best physical development of children.

Early in the work much of the parent training was through the medium of individual conferences with mothers by physicians, dentists, nurses, nutrition workers, and others. Later, there has been a growing tendency to include training of parents through adult classes. During the fiscal year which closed June 30, 1927, classes in which women were taught maternal, infant, and child care, including child management, and formation of habits, were conducted in twenty-seven states. The total number of classes reported organized was 1196; the number of lessons in the course varied from three to twenty-four. There were enrolled 26,356 women, mostly mothers, and 19,998 women were reported as completing the courses. Indiana led in the number of classes organized—220, with an enrollment of 9749 women, of whom 9665 completed a course of five lessons. The states reporting such courses were Arizona, Arkansas, California, Colorado, Georgia, Indiana, Kentucky, Maryland, Michigan, Minnesota, Missouri, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, Oklahoma, Oregon, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, and West Virginia.

Similar instruction in infant and child care was given during the same year to girls about ten to fifteen years of age in twenty-

[90] The members of this Board are the Chief of the Children's Bureau, the Surgeon General of the United States Public Health Service, and the United States Commissioner of Education.

seven states and the Territory of Hawaii. The total number of classes reported organized was 1999. There were 22,191 girls enrolled, and 18,136 girls completed courses, usually of ten to twelve lessons. This instruction covered the care of the baby and preschool child, which included regulation of his habits.

Instruction in prenatal and infant care was given to women through correspondence courses by four states: Minnesota, Virginia, Washington, and West Virginia. In three of these states the lessons were corrected and returned. Prenatal letters were used as a medium of instruction for expectant mothers in the essentials of care and hygiene of pregnancy by 22 states.[91]

(2) Colorado State Psychopathic Hospital. An innovation in the service that a state hospital may render to an educational program has been developed at the Colorado State Psychopathic Hospital. For the past few years this hospital has offered a course on childhood psychopathology. This was organized chiefly for the relatives of the patients, but the members are about half teachers and parents. Besides meeting the need for which it was intended, it has resulted in referring to the clinics a large number of children who otherwise would not be considered for treatment.

c. County Public Health Service. The Public Health Center of Alameda County in Oakland, California, endeavors to present various aspects of child life in its program for positive health. This organization in coöperation with the Parent-Teacher Association arranged for the first parental education conference on the western coast and assisted in the organization of the child-study groups that were conducted by the Bureau of Child Study and Parent Education of the California State Department of Education during its early development and is one of the chief factors for the continuance and expansion of this program in the county.[92]

The Monmouth County Organization of Social Service[93] has incorporated the various aspects of child development into the health service. The program for parental education is closely associated with the services of the school nurses.

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[91] For the text of the law, a detailed discussion of the administration of this act in forty-five states and the Territory of Hawaii, and some results of five years of work under the Act, see report of the Administration of the Act of Congress of November 23, 1921, for fiscal year June 30, 1927. (Children's Bureau Publication No. 186, United States Department of Labor.)

[92] See this chapter, under discussion of "State Department of Education."

[93] See in this chapter, "Social Agencies."

d. City Public Health Service. Health organizations in a number of cities have either added specialists to their staff or are cooperating with educational and welfare organizations that may supply the service of specialists in other phases of child development than physical. Thus many remedial and preventive health clinics are able to give the parent an analysis of the child's development in its many phases.

In Chicago, the Infant Welfare Society coöperates with the Institute of Juvenile Research, the Elizabeth McCormick Memorial Fund, and other welfare agencies in a well-rounded service. In a similar manner the Infant Welfare Society in Minneapolis cooperates with the Institute for Child Welfare at the State University of Minnesota. In Cleveland the Child Training Committee of the Children's Conference has been associated with the Health Council. "The Committee has furnished to the Prenatal Education Committee of the Health Council a leader for eighty-six classes, each of two to fifteen members. This is the most interesting piece of work in which we have coöperated and surely furnishes the best opportunity for preventive work. About 86 percent of the registrants have been women with first babies. Each mother comes to class six times; three discussions are given to health and three to mental health of the mother and the psychological development of the baby."[94]

In Philadelphia the health agencies have coöperated with the Parents Council in the organization of study groups.

e. The Elizabeth McCormick Memorial Fund. This Fund is a private agency in Chicago, which carries on a program of parental education as part of its work of improving the conditions of child life. There are six divisions of work of which this parental education is the major part: (1) nutrition classes, (2) health supervision of families of pensioned mothers and groups under regular supervision of the United Charities, (3) health education in schools, (4) nursery schools, (5) health education in the Michael Reese Hospital and Dispensary, and (6) parent classes not associated with children under supervision.

1. Parent groups associated with nutrition classes have been carried on since 1919. The work was undertaken in an effort to overcome malnutrition among children, and instruction to parents on child care was

[94] Quotation from recent report of the Child Training Committee.

therefore an important phase from the beginning. The work with parents in this division includes both individual instruction by the examining physician and nutrition worker and group instruction at the regular meetings. These occur weekly. An extension of this work in certain centers has included the organization of classes on cooking and child feeding, organized in coöperation with the home economics departments of the centers in which the classes meet.

2. Health supervision of children of pensioned mothers and families under the direction of the United Charities was organized in 1920. Parental training played a small part in this work at the beginning, but has gradually evolved into a most important part of the program. The instruction here is also individual and group. The group instruction occurs at the regular meetings which are held monthly. The objective in this work is not to deal merely with a physical defect or a condition of poor nutrition but to provide supervision for the entire family group; therefore the parental instruction deals with medical supervision, family program, and home control necessary to produce this.

3. Health education in certain Chicago schools was organized by the Fund in 1924. Periodic parent meetings have been made a part of this work from the beginning, but a regular organized parent group for instruction was started in the fall of 1927. The parent groups have been organized around the kindergarten and primary grades, and the health and nutrition of the young child has been the subject of the lessons. The meetings have occurred every two weeks.

4. In connection with the physical care of the children in the Franklin Nursery School, the Fund has carried on, since the fall of 1926, parental instruction through individual monthly conferences and through three or four group meetings during the year. Special emphasis in the work has been placed upon the individual conference at which the pediatrician, the nutrition worker, and the educational director confer with the mother on specific problems relating to physical care and home control.

5. Health education in the Michael Reese Hospital and Dispensary was started by the Fund in April, 1928. From the beginning, the program included instruction of an organized group of those parents whose children were kept for a long period in the children's hospital. The size of the group has varied from eight to fifty, with a stable group of eight to ten. The lessons have included physical care, home management, and child training, and the professional staff associated with the pediatric and psychiatric departments of the hospital has been drawn upon for leadership.

6. Classes for parent instruction have also been organized at the request of certain communities which have not been associated with child-health supervision. These have included groups organized in connection with schools, clubs, and settlement houses and special study circles. The number of lessons has varied according to the group; a

few had a series of only three or four meetings; others organized for a series of twelve to fifteen meetings. Subject matter has included health, nutrition, play, home control. The majority of the groups has been organized around the needs of a particular age group.

7. Another service conducted by the Fund, which does not come within the scope of classes, includes the preparation of teaching material, which is being used more and more by parent groups.

8. The child-welfare library is also available to leaders and members of parental educational groups anywhere in the United States. Upon request, the library prepares bibliographies on any child welfare topic. A total of 766 child welfare bibliographies was sent out during the period 1927-28 to 41 states and 12 foreign countries. Most of these were requested by parents or by teachers or students of child training courses. Loan packages have also been sent upon request. A total of 226 packages was sent to 23 states during 1927-28.

14. Religious Agencies

A number of religious organizations realized the possibilities for further service in the promotion of parents' classes in child study. Oftentimes the attempts to introduce these courses in a program of religious education were sporadic. In a few cases the plan was endorsed by church conferences and national religious organizations, as the General Sunday School Board of the Methodist Church South, the Relief Society of the Church of the Latter Day Saints, and the National Young Women's Christian Association. In the two former cases study materials have been arranged, courses outlined, groups organized, and provision made for the training of discussion leaders for these groups.

The National Young Women's Christian Association appointed a special group known as the "Commission on the Problems in the Family Life of To-day," to study the possibilities for such a program for their members. The preliminary report consists of a tentative discussion, outlines, and bibliographies of family problems.

In a number of churches groups of young parents, usually as members of the Sunday school, have selected for the subjects of their discussions problems in child development and family relationships. In Boston, Cleveland, Ames, Iowa, and elsewhere, professors of psychology and sociology have been solicited to conduct these discussion groups. In some cases the leaders received remuneration. Many of these courses were short units, such as twenty-six Sundays, or six forums; others were continuous. At

Logan, Utah, a group of parents have met as a Sunday school class for the last five years. This group has made a detailed analysis of the objectives of the home and formulated a program for the sharing of family responsibilities. The time and financial schedules have been followed successfully in a large number of families, not only in the local community but in the state.[95]

In a number of cities the church served as a nucleus for the organization of a lecture course or child-study class. The Mt. Pleasant Congregational Church at Washington, D. C., sponsored a course of lectures on child guidance, and the Methodist Church at Evanston, Illinois, a discussion group for mothers of preschool children, under the guidance of a director of the National Kindergarten and Elementary College.

Where a community project in child study and parental education is being promoted, one often finds the religious organizations one of the coöperative agencies, as in Philadelphia through the Parents Council and in Cleveland through the Child Training Committee. In Tulsa, Oklahoma, the parents' classes in the Methodist Church South have coöperated with the Mothercraft program in the public schools of that city.[96]

III. A General Summary of the Parental Education Movement

The movement for parental education is a popular one. The demand by parents for information and guidance and the interest of specialists from varied fields are rapidly developing parental education programs throughout the United States. The survey which has been given indicates something of the variety of programs and the spread of interest which the movement includes. The list of agencies conducting programs which follows, though it does not claim to be complete, will give some idea of the number of agencies at work and their geographical distribution.

In a movement developing so rapidly it is difficult to determine what the outstanding characteristics are. However, a few significant features are evident.

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[95] Richards, B. L. "How parents can educate themselves." *Children*, 2: 1927, 20-21.

[96] See State Department of Vocational Education, Oklahoma, elsewhere in this chapter.

1. General Characteristics

a. Coördination of Programs. There has been a very general effort in the child study and parental education movement to coördinate the programs of all agencies in a community which are interested in the welfare of children. In the establishment of parental education programs, whether national, state, county, or city, fewer attempts have been made to set up an independent unit than are usual in the promotion of a new project. Early in the development of the movement the leaders realized:

1. That the program would be more effective if the presentation of the newer knowledge of child development were given through the already well-established child welfare agencies than if promoted by a new organization;

2. That any one agency is limited in the number of people it can reach, whereas the influence of a group of agencies may be far-reaching;

3. That unless there is a continuity of interest throughout the child-study programs that are presented to parents and children by these various agencies, very little of permanent value will be accomplished.

Various types of coördinated programs are being developed. In several states coördination is being worked out under the leadership of the state university or the state department of education. Iowa and California offer examples of state coördinated programs, the former through the Iowa Child Welfare Research Station at the University of Iowa, and the latter through the newly-organized Bureau of Child Study and Parent Education in the State Department of Education.

The coördination of all agencies in a county has been ably demonstrated by the Monmouth County Organization for Social Service. A number of attempts are being made to organize a coördinated program in large cities. Cleveland and Philadelphia are apparently successful in the promotion of a parental education program through the coöperation of the educational, health, religious, relief, correctional, and remedial agencies in these cities. In smaller cities there are several attempts to bring together the various agencies through a council or committee on parent education. Wichita, Kansas, has such a plan in operation.

b. National Council of Parental Education. Probably one of the most outstanding evidences of the desire of the leaders in this movement to effect coöperation between various groups is the establishment of the National Council of Parental Education. This Council was organized in the fall of 1925. Less than three years later headquarters offices were opened in New York City with a director and an executive secretary. The purpose of the Council is to further the development of the field of parental education. It aims to act as a clearing house, and insofar as possible attempts to prevent duplication and to effect affiliation between the programs in adult education and child welfare.

Membership in the Council is limited to agencies developing parental education programs. There are three classes of membership on the basis of the contribution of the agency.

c. Extension of Programs. Another evidence that parent education is becoming an integrated part of other educational programs rather than an isolated venture is the tendency for the programs to develop out of already established work. This has been done in two ways: by increasing the service already offered in parental education; or by developing a new department within an established agency to bring together sporadic interest and promote a definite program. The Child Study Association of America is an example of the first method of meeting the increasing demand for parent education. Among the organizations that have developed programs according to the second plan are the American Association of University Women (by the appointment of an educational secretary to direct the child-study program), the American Home Economics Association (by provision for a field worker in child study and parental education), and a number of universities (by the establishment of centers of child welfare research).

d. Conferences. The list of conferences on child study and parental education which are included in this chapter[97] show how widespread has been the interest in the movement, especially during the last five years. These conferences were sponsored by various national, state, and local organizations, but were made possible only through the coöperative efforts of specialists and organizations interested in the welfare of children.

[97] See pages 346-350.

Besides the conferences entirely devoted to child study and parental education, there have been a large number of professional meetings which have given a place on their program to child study and parental education. This seems significant of the interest and coöperative service which has been given the movement during its formative period.

2. Common Problems

a. Exploitation. The fact that the demand for parental education has not been the result of slow growth but has been a sudden awakening to an age-old need, is the source of many problems. As is usual in the initiation of a new movement there is danger of exploitation and overdevelopment due to overenthusiasm, lack of leadership, and the promotion of the project for selfish purposes. In order that parents shall not be exploited, it is necessary that development shall not outstrip our ability to meet parental education needs.

b. Need for research. Leaders of parent groups, administrators, observers, and critics are often not sufficiently aware that parental education programs must be considered experimental. The sciences relating to child life and human behavior are not exact and in most phases are still in an embryonic stage. There is need for further research in child development. Practically nothing has been done of an experimental nature to evaluate methods and procedures in study groups, content courses, and other types of parental education.

Many of the directors of parental education programs and leaders of child-study groups are aware of these problems and are endeavoring to meet them. A tentative, testing, investigatory attitude towards all phases of the work is the only safeguard and insurance for the improvement and development of the movement.

c. Leadership.[98] Probably the most important problem for all agencies in parental education to-day is the selection of leaders. Upon the wisdom of the leader may depend the worth of the whole program. This is true in regard to non-professional as well as professional leaders. A specialist who is trained in one field must realize that child training is not a one-sided job, that parents need not medicine nor psychology nor nutrition nor hygiene nor educa-

[98] For a detailed discussion of the problem of leadership, see Ch. XIV.

tion, but an integration of all sciences and philosophy in terms of child development.

No one person can be a specialist in all phases of child life, but he can so supplement his major field as to present to the parent a total picture of child life rather than a one-sided view.

3. Financing of Programs

Parental education programs are financed from various public and private funds. Federal, state, and local taxation budgets have contributed, whole, or in part to parental education programs as sponsored by a local school system, state university, teachers' college, state department of education, or the extension service of the state colleges of agriculture and mechanic arts. Contributions from private sources have been secured from national or local philanthropic organizations and foundations, community chest funds, subscriptions from individuals, and membership fees.

The public and private funds that may be considered as possibilities for assistance in the financing of parental education programs are those that are devoted to, or related to, the welfare of women and children, specific or general. The public funds that have already contributed in whole or in part to these various programs in the United States are: the Smith-Lever Fund, as a part of the extension service of the state colleges of agriculture and mechanic arts; the Smith-Hughes Fund, as a part of the program of Vocational Education, supervised by the state departments of education; the Sheppard-Towner Fund, as a part of the program of the Infant and Maternity Hygiene supervised by the United States Children's Bureau and State Department of Health; the Purnell Fund in its research program in home economics, supervised by a committee at the state college of agriculture and mechanic arts. Some of the private agencies that have provided grants for the organization or the furtherance of these projects are the Laura Spelman Rockefeller Memorial, the Elizabeth McCormick Memorial Fund, and the Commonwealth Fund.

4. Possibilities for Further Developments

a. Parental Education as Part of the Public-School System. Of the various agencies promoting the parental education programs described in the second section of this chapter, the public school

is probably one which offers great possibilities for further developments.

Since the school is increasingly taking into consideration the total child in the total situation, it is apparent that some consideration should be given to the education of the parents. Educators are more and more realizing that it is function of the schools to assist in the integration of the personality of each child. This is possible only where there is a continuity of procedure in regard to the treatment of children in the school and in the home. Where there is an atmosphere of conflict between home and school or where there is disagreement in demands and standards, wholesome development for the child is impossible. A conflict between home and school means a conflict within the child.[99]

The child-guidance clinic, the visiting teacher, and the school nurse are among the services for parents that already have been incorporated into the school system with apparent success. Each of these, however, offers education to the parent in but one aspect of child development and serves only a small proportion of parents. They are also for the most part remedial programs and are concerned with problems of physical illness or of behavior. The child-study program as a positive and preventive measure would extend its services to all parents in a community, particularly to those with young children, and undoubtedly would prevent many problems from developing.

The introduction of a parental education program into a public-school system may also be justified from the view of effective community organization and extension of the services of the school beyond that of the day school. The part-time and evening classes, the use of the school for recreational and civic purposes, are examples of such extension.[100] It is a generally accepted theory by those experienced with community organizations that the most effective method of initiating a new program into community activities is to have the new interest coördinated with, or incorporated into, an already well-established institution, rather than to promote an entirely new and independent organization.

[99] The results of a continuous conflict in the home, school, and community are presented by Dr. Miriam Van Waters, referee of the Juvenile Court of Los Angeles, in *Youth in Conflict*. New York: New Republic, 1925.

[100] A discussion of experimental programs that have been organized as a part of the adult education program of a public-school system is given elsewhere in this chapter with reference to California, Oklahoma, and Nebraska.

The school already has the interest of the parents and is more likely to reach a larger percentage of them with the least effort than any other agency. The parents naturally turn to the school for guidance in regard to problems relating to their children. Furthermore, the school is in constant need of interpretation to the parents. Since there is this mutual interest between the parent and the school, there is no reason why these services, together with many others, could not be rendered by a parental education program.

Boards of education in many communities may be unable to justify the expenditure of public funds for a program that is still so new. As has been true of most innovations in curriculum and services incorporated into the school system, it has been necessary for private agencies or individuals to carry on the early experiments. It is anticipated that parental education will be adopted when the methods of organization and procedures in the conduct of study groups are more clearly formulated and when the courses of study and materials are organized to meet the needs of the various educational, intellectual, and social levels.

The public school may then become the nucleus of the parental education program in the community, with the agencies interested in the welfare of children coöperating. The necessity for this cooperation should not be disregarded. A tendency on the part of public education to take over the movement too rapidly or to limit its early development would be unfortunate. The ideal combination of private initiative, vision, and enthusiasm with scientific standards and stability needs to be kept in mind. It is a wholesome indication that parental education has been claimed by a wide variety of educational fields, and it is in its favor that specialists with many backgrounds are champions of its cause. Wherever its administration is taken over by any specialty, it is essential that there be a coördination of many points of view and methods of approach.

b. Teacher Training. However, before such a program is generally adopted by the public schools, it will be necessary that adequate provision be made for the training of directors for these programs[101] and for teachers with an all-round understanding of the child. Teachers must begin to understand and appreciate the physical and emotional aspects of child development equally with

[101] See Ch. XIV, "Training for the Field of Parental Education."

the intellectual aspect. They must have the materials and know how to provide for a well-rounded child growth. They must realize and take into consideration in their teaching a twenty-four hour day for each child. This point of view towards child education leads inevitably to the education of parents. A few normal schools and teachers colleges are beginning to provide a program of teacher training on this basis, but the reorganization of teacher training curricula on the principle of child development has scarcely been touched.

Teachers in service should be encouraged to become acquainted with the parental education movement through reading, lectures, observation of children outside of school, extension courses, study groups, and so forth. Supervisors of elementary-school teachers can make a real contribution by directing the attention of their teachers to a movement which promises to be increasingly a part of modern education.

IV. List of Agencies Actively Engaged in Parental Education[102]

State	*City*	*Agency*	*Department*
California	Berkeley	University of California	Institute of Child Welfare
	Los Angeles	Federation of Women's Clubs	Child Welfare Department
		Juvenile Court	Referee
		City Schools	Dept. of Psychology and Educational Research
	Oakland	Public Health Center of Alameda County	Secretary of Health Education
	Sacramento	State Dept. of Education	Division of Adult Education, Bureau of Parent Education
Colorado	Denver	Psychopathic Hospital	
Connecticut	New Haven	Yale University	Yale Psycho-Clinic
District of Columbia	Washington	American Association of University Women	Educational Office
		U. S. Dept. of Agriculture	Bureau of Home Economics
		Federal Brd. for Vocational Education	Home Economics Education Service
		U. S. Dept. of the Interior	Bureau of Education
		American Home Economics Association	Child Development and Parental Education
		U. S. Dept. of Labor	Children's Bureau
		Progressive Education Association	
		National Congress of Parents and Teachers	Department of Home Service
		U. S. Public Health Service	Child Hygiene Office

[102] Nursery schools are omitted from this list, but are listed at the end of Ch. VIII. Branches or subdivisions of national organizations are not listed.

State	*City*	*Agency*	*Department*
Georgia	Athens	State College of Agriculture	Dept. of Home Economics
Illinois	Chicago	Hyde Park Baptist Church	Educational Department
		Institute for Juvenile Research	
		Elizabeth McCormick Memorial Fund	
		Chicago Association for Child Study and Parental Education	
		University of Chicago	Home Study Course
		Public Schools	Franklin Public School Nursery
	Evanston	National Kindergarten and Elementary College	Dept. of Parental Education
	Urbana	University of Illinois	Extension Specialist in Child Care and Training
Iowa	Ames	Iowa State College of Agriculture and Mechanic Arts	Dept. of Home Economics
			Extension Specialist in Child Care and Training
	Cedar Falls	Iowa StateTeachers College	Extension Department
	Council Bluffs	Public Schools	Child Study Department
	Des Moines	Public Schools	Dept. of Parental Education
	Iowa City	University of Iowa	Iowa Child Welfare Research Station
			Extension Division
Kansas	Kansas City	Board of Education	Children's Bureau
	Lawrence	University of Kansas	Kansas Bureau of Child Research
	Manhattan	Kansas State Agricultural College	Dept. of Home Economics
	Wichita	Parental Education Committee in Coöperation with Board of Education	
Maryland	Baltimore	Johns Hopkins University	Psychology Dept., Child Institute
Massachusetts	Boston	Nursery Training School of Boston	
		Community Health Association	Mass. Dept. of Mental Diseases
	Northampton	Smith College	Institute for the Coördination of Women's Interests
Michigan	Ann Arbor	University of Michigan	School of Education
	Detroit	Merrill-Palmer School	
		Liggett School	
		Probate Court	Juvenile Division, Mother's Pension Fund
Minnesota	Minneapolis	University of Minnesota	Institute of Child Welfare
			Extension Specialist in Child Study
		Women's Coöperative Alliance	Dept. of Parent Education
		Infant Welfare Society of Minneapolis	
Missouri	Kansas City	Children's Bureau	
Nebraska	Lincoln	University of Nebraska	Home Economics Dept.
	Omaha	Board of Education	Dept. of Parent Education

State	City	Agency	Department
New Jersey	Red Bank	Monmouth County Organization for Social Service	Dept. of Child Study
	New Brunswick	Rutgers University	Extension Department
New York	Albany	State Dept. of Education	Director of Child Development and Parental Education
	Ithaca	New York State College of Home Economics, Cornell University	Child Training Department Extension Department
	New York City	National Council of Parental Education	
		Teachers College, Columbia University	Institute of Child Welfare Research
		Child Study Association of America	
		Institute of Child Guidance	
		Children, The Magazine for Parents	
		Young Women's Christian Association	Commission on the Family in the Life of To-day
		United Parents' Association of Greater New York Schools	
	Poughkeepsie	Vassar College	Dept. of Euthenics
North Carolina	Chapel Hill	University of North Carolina	Institute for Research in Social Service
	Raleigh	State Dept. of Education	Home Economics Dept.
		Institute on Parental Education	
North Dakota	Fargo	American Child Health Demonstration	
Ohio	Cincinnati	University of Cincinnati	Dept. of Household Administration
	Cleveland	Western Reserve University and Board of Education	Cleveland School of Education
		Western Reserve University	Cleveland College, Parental Education
		Maternity Hospital	
		Children's Conference	Child Training Committee
	Columbus	Ohio State University	College of Education, Adult Education Extension Department
Oklahoma	Ardmore	Public Schools	Mothercraft
	Bristow	Public Schools	Mothercraft
	Norman	University of Oklahoma	Dept. of Home Economics
	Oklahoma City	Public Schools	Mothercraft
		Women's Christian Temperance Union	Child Welfare Department
		Department of Vocational Education	Division of Home Economics
	Okmulgee	Public Schools	Mothercraft
	Tulsa	Department of Vocational Education	Mothercraft
Oregon	Salem	American Child Health Demonstration	
Pennsylvania	Philadelphia	Parents Council of Philadelphia	

State	*City*	*Agency*	*Department*
Tennessee	Nashville	Methodist Episcopal Church, South	Home and Parent Teacher Work
		State Dept. of Vocational Education	
Utah	Logan	Utah State College	Parents Classes in Family Relationships
	Salt Lake City	Latter Day Saints Church	Relief Society
Virginia	Richmond	State Board of Health	Bureau of Child Health
	Williamsburg	William and Mary College	Extension Department
Washington	Pullman	State Agricultural College	Extension Department
Canada	Montreal	McGill University	
		Canadian National Committee for Mental Hygiene	Division of Parental Education
	Toronto	University of Toronto	St. George's School for Child Study

V. Conferences

1. List of Conferences on Preschool and Parental Education

A. National

Sponsors	*Name of Conference*	*Date*	*Location*
Child Development Committee, National Research Council	First Conference on Research in Child Development	Oct. 23-25, 1925	Bronxville, N. Y.
	Second Conference on Research in Child Development	May 5-7, 1927	Washington, D. C.
Child Study Association of America	Conference on Parental Education*	Oct. 19-26, 1925	Bronxville, N. Y.
	Modern Parenthood†	Oct. 26-28, 1925	New York City
	Institute on Parental Education (for Study Group Leaders)	Oct. 29-Nov. 7, 1925	New York City
	Institute on Parental Education (for Study Group Leaders)	Jan. 17-28, 1927	New York City
(Joint Conference with Teachers College, Columbia University)	Parental Education and the Public Schools	July 24-26, 1928	New York City
International Kindergarten Union‡	28th Annual Meeting†	May 2-6, 1921	Detroit, Mich.
	29th Annual Meeting†	April 24-28, 1922	Louisville, Ky.
	31st Annual Meeting†	May 5-9, 1924	Minneapolis, Minn.
	32nd Annual Meeting†	July 8-11, 1925	Los Angeles, Cal.
	33rd Annual Meeting†	May 3-7, 1926	Kansas City, Mo.
	34th Annual Meeting†	April 25-28, 1927	New Haven, Conn.
	35th Annual Meeting†	April 16-19, 1928	Grand Rapids, Mich.
Merrill-Palmer School	The Home Problems Conference	April 18-20, 1927	Detroit, Mich.
National Council of Parental Education	Second Conference	Oct. 25-28, 1926	Detroit, Mich.

Sponsors	*Name of Conference*	*Date*	*Location*
Nursery School Workers, Temporary Association	Conference on Nursery Schools	Feb. 26-27, 1926	Washington, D. C.
National Committee on Nursery Schools	Conference on Nursery Schools†§	April 22-23, 1927	New York City
University of Minnesota Institute of Child Welfare and Home Economics Dept.	Child Training and Home Management†	June 25-26, 1926	Minneapolis, Minn.
Vassar College	Nursery School Conference	Feb. 6-7, 1928	Poughkeepsie, N. Y.
	B. Regional		
Baltimore District and Child Study Association of America	Concerning Parents	Nov. 30-Dec. 1, 1926	Baltimore, Md.
Chicago Association for Child Study and Parent Education	Mid-West Conference on Parent Education†	March 4-6, 1926	Chicago, Ill.
	Mid-West Conference on Character Development†	Feb. 16-18, 1928	Chicago, Ill.
Childrens' Bureau of Kansas City and Kansas Bureau of Child Research, Lawrence, Kansas	Mid-West Conference on Education for Parenthood	March 2-5, 1927	Kansas City, Mo.
Iowa State College, Home Economics Division	Home Economics Conference for Parents	May 24-25, 1926	Ames, Iowa
	Third Parental Education Conference	Nov. 8-9, 1927	Ames, Iowa
Iowa State College and Home Economics Association	Extension Program in Child Development and Parent Education	June 23, 1928	Ames, Iowa
Merrill-Palmer School and American Association of University Women: Michigan Division	Merrill-Palmer Institute for Preschool Study Group Leaders	Oct. 5-7, 1927	Detroit, Mich.
Mills College	Conference on Development and Guidance of the Preschool Child†	April 5-7, 1928	Mills College, Cal.
University of North Carolina, Dept. of Health, Dept. of Public Welfare and other organizations	Institute on Parental Education	Feb. 14-16, 1928	Raleigh, N. C.
Oklahoma State Board for Vocational Education and University of Oklahoma	First State Mothercraft Conference	July 20-24, 1925	Norman, Okla.

Sponsors	*Name of Conference*	*Date*	*Location*
Oklahoma State Board for Vocational Education and Oklahoma City Council of Parents and Teachers	School for Parents	Feb. 21-26, 1927	Oklahoma City, Okla.
Oklahoma State Board for Vocational Education and Tulsa City Schools	Parents' Institute	Feb. 24, 1927	Tulsa, Okla.
Oklahoma State Dept. of Vocational Education and University of Oklahoma	State Conference on Child Development and Parent Education	Feb. 25-26, 1927	Norman, Okla.
Oklahoma State Dept. of Vocational Education	Adult Education Conference	Sept. 30-Oct. 1, 1927	Oklahoma City, Okla.
Oregon State Agricultural College, School of Home Economics	Parental Conference Program	May 19, 1928	Corvallis, Ore.
Southern California Society for Mental Hygiene and 25 organizations	Southern California Conference on Modern Parenthood†	Dec. 15-18, 1926	Los Angeles, Cal.
State University of Iowa and Iowa Child Welfare Research Station	State Conference on Child Development and Parent Education	June 23-25, 1927	Iowa City, Iowa
	Second Annual State Conference on Child Study and Parent Education	June 20-22, 1928	Iowa City, Iowa
50 Organizations of Alameda County, California	The Awakening Responsibility of Parents	April 15-17; 24, 1926	Oakland, Cal.
121 Organizations of Minnesota	Northwest Conference on Child Health and Parent Education†	March 8-10, 1927	Minneapolis, Minn.
	Northwest Conference for Child Health and Parent Education**	March 27-29, 1928	St. Paul, Minn.

C. Local

Chicago Association for Child Study and Parental Education	Parent Education	March 15-17, 1926	Chicago, Ill.
	One Day Conference	March 5, 1927	Chicago, Ill.
Child Study Association of America	First General Conference for Study Group Leaders	Nov. 6-7, 1924	New York City
	Present Day Parenthood	May 28, 1926	Cleveland, Ohio
	One Day Conference on Parent Education	Nov. 2, 1927	New York City

Sponsors	*Name of Conference*	*Date*	*Location*
Child Training Committee of the Childrens' Conference of Cleveland	Fourth Annual Meeting	Oct. 18, 1927	Cleveland, Ohio
Iowa Child Welfare Research Station and Child Study Dept. of the Public Schools	Conference on Modern Parenthood	March 17-18, 1927	Council Bluffs, Iowa
Iowa Child Welfare Research Station and Parent-Teachers Association	Conference on Parent Education and Child Study	Feb. 17-18, 1926 Feb. 28-29, 1927	Oskaloosa, Iowa Oskaloosa, Iowa
Oskaloosa Parent-Teacher Association and the Parent-Teacher Council	Conference on Parent Education and Child Study	Feb. 17-18, 1926	Oskaloosa, Iowa
Parents League of Brooklyn and Others	Two All-Day Conferences	Jan. 13, 25, 1926	Brooklyn, N. Y.
Welfare Federation of Cleveland	Fifth Annual Community Welfare Conference	Oct. 20, 1927	Lakewood, Ohio

* An outcome of this conference was the organization of the National Council of Parental Education.
† Proceedings of this conference have been published.
‡ Meetings of the International Kindergarten Union have been held annually since 1893. Meetings of this organization listed above included discussion of children under kindergarten age.
§ At this conference the National Committee on Nursery Schools was organized.
** Proceedings are to be published.

2. List of National Conferences Which Have Included Discussions of Preschool and Parental Education

Name of Organization	*Date of Meeting*	*Place*
American Association of University Women	April 5-8, 1922	Kansas City, Mo.
	July 16-21, 1923	Portland, Ore.
	April 21-25, 1924	Washington, D. C.
	April 8-11, 1925	Indianapolis, Ind.
	March 31-April 2, 1927	Washington, D. C.
American Association for Organizing Family Social Work	Oct. 2-5, 1927	Buffalo, N. Y.
American Child Health Association	June 28-July 6, 1923	San Francisco, Cal.
	Oct. 15-17, 1923	Detroit, Mich.
	June 23-28, 1924	Cambridge, Mass.
	May 17-22, 1926	Atlantic City, N. J.
	May 9-11, 1927	Washington, D. C.
American Home Economics Association	July 30-Aug. 3, 1923	Chicago, Ill.
	Aug. 1-6, 1925	San Francisco, Cal.
	June 28-July 2, 1926	Minneapolis, Minn.
	June 28-29, 1926*	Philadelphia, Pa.
	June 21-24, 1927	Asheville, N. C.
	June 25-29, 1928	Des Moines, Iowa
American Orthopsychiatric Association	Feb. 24-25, 1928	New York City, N. Y.
American Psychological Association	Dec. 28-30, 1926	Philadelphia, Pa.

Name of Organization	*Date of Meeting*	*Place*
American Sociological Society	Dec. 27-30, 1927	Washington, D. C.
Association of Land-Grant Colleges and Universities	Nov. 17-19, 1925	Chicago, Ill.
	Nov. 16-18, 1926	Washington, D. C.
	Nov. 15-17, 1927	Chicago, Ill.
Department of Superintendence, National Education Association	Feb. 21-25, 1926	Washington, D. C.
	Feb. 26-March 4, 1927	Dallas, Texas
	Feb. 25-March 1, 1928	Boston, Mass.
General Federation of Women's Clubs	May 28-June 7, 1928	San Antonio, Texas
National Conference of Social Work	May 16-23, 1923	Washington, D. C.
	June 10-17, 1925	Denver, Colo.
	May 26-June 2, 1926	Cleveland, Ohio
National Congress of Parents and Teachers	April 23-28, 1923	Louisville, Ky.
	May 5-10, 1924	St. Paul, Minn.
	April 27-May 2, 1925	Austin, Texas
	May 3-8, 1926	Atlanta, Ga.
	June 29, 1926*	Philadelphia, Pa.
	May 21-28, 1927	Oakland, Cal.
	April 27-May 5, 1928	Cleveland, Ohio
National Council of Kindergarten Supervisors and Training Teachers	March 1, 1927†	Dallas, Texas
	February 29, 1928‡	Boston, Mass.
National Council of Primary Education	March 2, 1927†	Dallas, Texas
	Feb. 27-28, 1928‡	Boston, Mass.
National Education Association	June 27-July 2, 1926	Philadelphia, Pa.
	July 3-8, 1927	Seattle, Wash.
	July 1-6, 1928	Minneapolis, Minn.
National Federation of Day Nurseries	June 3-5, 1925	Chicago, Ill.
	May 5-6, 1927	Washington, D. C.
National Society for the Study of Education	Feb. 25 and 28, 1928‡	Boston, Mass.
Progressive Education Association	April 28-30, 1927	Cleveland, Ohio
	March 5-10, 1928	New York City, N. Y.
The Fifth Pan-American Child Congress, Republic of Cuba	Dec. 8-13, 1927	Havana, Cuba
World Federation of Education Associations	July 20-27, 1925	Edinburgh, Scotland
	Aug. 7-13, 1927	Toronto, Canada

* Held in connection with the 64th Annual Meeting of the National Education Association.
† Held in connection with the 57th Annual Convention of the Department of Superintendence of the National Education Association.
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CHAPTER XI

EXPERIMENTS IN PREPARENTAL TRAINING[1]

I. The Scope of This Section

Preparental education frequently uses nursery schools as laboratories for students and often takes place in centers where parental education and professional training are also going on. An account of the one cannot avoid reference to the others, nor can discussion of one remain free from some overlapping with discussions of the others. The development of preparental education has in many centers paralleled that of parental and nursery-school education, each contributing to the others, and each gaining from the others knowledge of teaching methods, of content for courses, of texts, and of administrative methods. What follows is concerned, however, primarily with preparental education and refers to nursery schools only when necessary to the discussion of laboratory facilities. The discussion can be differentiated from professional training for child care, nursery schools, or parental education, by the fact that courses in preparental education are of the general orientation type, whereas classes for professional training have as objectives the specific training of advanced students for professional work.

Orientation courses are at the present time (June, 1928) being offered in elementary schools (most frequently in the upper elementary grades or junior high school), in secondary schools, and in colleges and universities. They are given in many cases without laboratory work, but in an increasing number of cases classroom work is accompanied by observation or practice, or both. Experience is obtained with children in nursery schools, in home management houses, orphanages, kindergartens, juvenile courts, infant welfare societies, habit clinics, nutrition clinics, or day nurseries. Sometimes children are brought into the classroom or gathered together in groups by the students themselves. In other places students are assigned to private homes where there are children or to their own homes if the student has young siblings.

[1] The Committee is indebted to Dr. E. Leona Vincent of the Merrill-Palmer School for contributions to this chapter.

II. Recent History and Development of Preparental Education in America

"If by some strange chance," wrote Herbert Spencer in *What Knowledge Is of Most Worth,* "not a vestige of us descended to the remote future save a pile of our school books or some college examination papers, we may imagine how puzzled an antiquarian of the period would be on finding in them no indication that the learners were ever likely to be parents. . . .

" 'This must have been the curriculum for their celibates,' we may fancy him concluding. 'I perceive here an elaborate preparation for many things, especially for reading the books of extinct nations and of co-existing nations, but I find no reference whatever to the bringing up of children. They could not have been so absurd as to omit all training for this gravest of responsibilities. Evidently then, this was the school course of one of their monastic orders.' "

This quotation from Herbert Spencer opens an article by Mrs. Eva von Bauer Hansl in the *Journal of the American Association for University Women* for January, 1922, in which the writer points clearly to the flagrant neglect of the subject of parenthood in American college curricula. She reminds us that, in spite of humanity's faith in its wisdom, reliance on untrained mother instinct has not prevented development of numberless social problems, nor succeeded in developing the optimal child about which sociology, medicine, psychology, and education teach.

One of the first and most enthusiastic advocates of preparental education writes:

"Practically no mother has had specific preparation for the training and education of young children. The community has considered the maternal instinct entirely adequate to guide a woman in her dealings with young children. Now we seem to be finding that the maternal instinct, untrained, and in many instances united with a low level of general intelligence, gives no better results than any other untrained instinct."[2]

There follows in this article a discussion of the school and court problems which result from mistakes made by the untrained mother instinct, after which Mrs. Woolley goes on to say: "The remedy

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[2] Woolley, Helen Thompson. "Preschool Education." *The American School,* 8: 1922, 173-176.

for these problems must be two-fold. We need better training for mothers before they undertake their task, and we need more adequate assistance rendered them while they are bringing up their young children.''

Not only have various individuals thus called attention to the wisdom of training mothers before they are actually faced with the problems of parenthood; several schools of thought likewise have for the past twenty years been leading in the same direction. Partly in response to researches in medicine, psychology, education, and sociology, which have made clear the possibility of developing better human beings through wise care of children, partly as a result of the realization that parents have an important part in this care, and partly as a reflection of the spread of the Dewey philosophy of education which points out that the function of public education is to prepare its students for real life situations, we find a number of writers and speakers in the decade from 1915 to 1925 expressing the idea that one of the duties of public education must be to train young people for parenthood.

1. A Plea and a Prediction in 1915

In October, 1915, Julia Lathrop, organizer and for many years director of the U. S. Children's Bureau, speaking before the alumnae of Vassar College, expressed the wish that colleges would do their share in developing a more intelligent motherhood. She also made a prediction—one which caused some merriment at the time among persons who lacked her clear-sightedness—that the future would see the development of graduate departments of research in the affairs of the home and of child life.

Only six years elapsed after this prediction until the Iowa Child Welfare Research Station, established in 1917 at the State University of Iowa, opened its first preschool laboratory and thereby established such a graduate department of research. This was not, to be sure, primarily a station which concerned itself with the education of young people for parenthood, but a center in which much valuable research in child development has taken place, and hence a station which, through the provision of material for teaching, has secondarily if not primarily, served the field of preparental education.

2. The Merrill-Palmer School

Almost coincidental with the establishment of the preschool laboratory of this first research center came the establishment of another center which had as its primary object the education of young women for motherhood. This was made possible by the legacy left by Mrs. Lizzie Merrill Palmer in July, 1916.[3]

Administration of details, appointment of a board of trustees and a board of directors, the securing of Miss Edna Noble White as director in February, 1920, the establishment of a coöperative arrangement with Michigan State College for work with students, delayed the final organization of the Merrill-Palmer plan for preparental study on the collegiate and university level until the spring months of 1921. In April, 1921, the director went to England to study the English nursery school plan, and there secured Miss Emma Henton to undertake the teaching of a nursery school which was to serve as a laboratory for students in parenthood.

In September, 1921, Mrs. Helen Thompson Woolley joined the Merrill-Palmer School staff as psychologist and director of the nursery-school project. The building which now serves as the main building was secured in November, 1921. The nursery school opened with twenty children, and classes for six students from Michigan State College began in January, 1922.

In the Second Annual Report of the Merrill-Palmer Motherhood and Home Training School, published in January, 1922, we find the following statement which is probably the first to be published about nursery schools as preparental laboratories:

"We feel, therefore, that the plan [the nursery-school plan] offers not merely a real opportunity to young children for physical,

[3] The text of the will is interesting, incorporating the following:

"I hold profoundly the conviction that the welfare of any community is divinely, and hence inseparably, dependent upon the quality of its motherhood, and the spirit and character of its homes, and moved by this conviction, I hereby give, devise and bequeath all the rest, residue and remainder of my Estate. . . . for the founding, endowment and maintenance, in the City of Detroit, or in the Township of Greenfield, County of Wayne, State of Michigan, of a school to be known as the Merrill-Palmer Motherhood and Home Training School, at which, upon such plan and system, and under such rules and regulations, as shall, in the judgment and wisdom of those upon whom the administration shall devolve, be adopted, girls and young women of the age of ten years or more shall be educated, trained, developed and disciplined with special reference to fitting them mentally, morally, physically and religiously for the discharge of the functions and service of wifehood and motherhood, and the management, supervision, direction and inspiration of homes."

mental, and social development, but also an opportunity to a group of young women for a vital type of laboratory work in child psychology, child health, and nutrition.''

3. A Report of Success and a Prediction in 1923

In a lecture before the National Conference of Social Work which met in Washington, D. C., in May, 1923, Dr. Woolley discussed the possibilities inherent in nursery schools as laboratories for preparental education. She described the reason for failure to provide training for so fundamental and important a function as parenthood, before the year 1922, as ''in part a late recognition of the great permanent importance of the training and management given to young childhood, and in part the very real difficulty inherent in providing training for parenthood years before young people are faced with that responsibility. The difficulty—thus far insurmountable—in teaching young people still in school about the care and management of young children is that the topic cannot be taught abstractly. To teach about the care and management of children without any children to be cared for or managed is even more hopeless as an educational project than to teach physics or biology without a laboratory.''

That nursery schools offered such a laboratory, would provide at the same time not only training to students in the problems of care and management of children, but also a desirable environment for young children, and would aid in the training of individuals who are already parents—that all three of these possibilities lay within the scope of the nursery school, seemed increasingly evident. In the same address Mrs. Woolley predicted: ''Though as yet our courses are planned for college girls, there is no reason why simpler courses could not be developed for high-school and for continuation-school girls. Indeed, if education of this type is to be made available for all young women, it must be done eventually as part of the public-school régime.''

4. The First Continuation-School Classes in Child Care

Within a few months after this prediction the first continuation-school classes in child care and training were started in the public schools of Detroit, using the Merrill-Palmer nursery school as a

laboratory for observation. Classes in child care in several public high schools and in one private high school in Detroit, each with the privilege of observation in the Merrill-Palmer nursery school, were also established.

In the fall of 1924, Miss Elizabeth Cleveland taught in a series of kindergarten training classes at Detroit Teachers College the material later published in the book, *Training the Toddler*. These classes were given an opportunity to observe in the Merrill-Palmer nursery school.

5. The Establishment of a Department of Child Care in a High School

In December, 1924, the Highland Park High School in Highland Park, Michigan, a suburb of Detroit, established a department of child care and required all senior girls to take the course. Classes meeting once each week throughout a semester considered "the physical, mental, and emotional aspects of child nature and the environmental needs which are most suited to the development of a well-rounded personality."[4]

Two laboratory periods per week were required to be spent in observation and assistance in what is probably the first nursery school to be opened as part of a public-school system for use as a laboratory in high-school classes in child care.

6. Other University Projects

In the spring of 1923 Ohio State University began its preparental program and early in 1925 established a nursery school as a laboratory.

In 1924 the University of Cincinnati established a School of Household Administration, including as one of the major departments a department of child care and parenthood education, the purpose of which was to reach not only the college students, but parents in the community as well.

In the summer of 1925 the College of Home Economics of the University of Nebraska, at Lincoln, Nebraska, organized a nursery school to serve as a laboratory for a child care and training course

[4] Bulletin on the Highland Park Nursery School, published by the Board of Education in Highland Park, Michigan, 1926.

offered that summer as a major unit in home economics. This project was repeated in the summer of 1926 and became a permanent part of the College of Home Economics in September, 1926.

The Oregon State Agricultural College, at Corvallis, Oregon, offered, in the summer of 1925, a class in child care and training with laboratory facilities in a nursery school opened at that time and conducted in close coöperation with the classroom teaching.

In February, 1926, Mills College in California opened its Child Study Laboratory, offering work of graduate rank.

During the summer session of 1926 the home economics department of Alabama Polytechnic Institute, at Auburn, Alabama, conducted a nursery school to be used as a laboratory for preparental education.

Kansas State Agricultural College also opened a nursery school to serve as a laboratory for courses in child care in the summer of 1926.

About the same time projects were begun at Cornell University, Vassar College, and Iowa State College at Ames, Iowa.[5]

III. The Teaching of Child Care Without the Aid of Nursery Schools

Miss Lathrop's interest in 1915 and the other forces which have been described earlier as influencing the development of courses in child care and training for preparents have found expression not only in the establishment of courses which use nursery schools as laboratories for students, but also in courses which provide for other types of laboratory experience.

1. A Baby in the Home Management House

In 1919 the Division of Home Economics of the University of Minnesota introduced the idea of keeping a baby in the home management house where students were already gaining practical experience in the problems of home management and where, through the care of a young child as part of their duties, they could also gain practical experience in the care of children. There is an advantage in this type of laboratory experience, since the students have contact with a child through the twenty-four hour cycle of

[5] A description of the work at these institutions is given elsewhere in this chapter.

his experiences. This gives them the opportunity of caring for all of his needs, whereas in the nursery-school type of laboratory only part of the day's routine with children is touched and only part of the duties of parenthood are encountered. A further advantage to students comes in the planning, organizing, and operating of a household around a child.

Disadvantages, however, lie in the fact that babies in home management houses are cared for by a rotating personnel, which necessitates for the child a great many adjustments to affection and authority, and in the fact that such children have little companionship with other children or with men.

Too little is known about the relative advantages or disadvantages of this type of laboratory to warrant a conclusion as to its desirability. The Conference on Children in Home Management Houses held in Minnesota in 1926 considered the matter and made recommendations which will be discussed in a moment. The College of Home Economics at Cornell University is now (June, 1928) studying the matter and will soon report upon it.

2. The Minnesota Conference on Child Training Courses and on Children in Home Management Houses

In June, 1926, a Conference on Child Training Courses and on Children in Home Management Houses was held at the University of Minnesota at the instigation of Dr. John E. Anderson and Miss Wylle McNeal. This conference, attended by fifty persons actively interested or engaged in teaching child-training courses or home-management laboratory courses, was called in the hope of gaining a better understanding of the problems in the two fields and of establishing closer coöperation between those attending.

Twenty-two institutions of collegiate rank were reported at this conference to be offering courses in child training.[6]

Courses were offered in these institutions under seventeen different names, though "Child Care and Training" and "Child Care" predominated. They were open to seniors in nineteen

[6] These were Cornell University, Iowa State College, Kansas State Agricultural College, Merrill-Palmer Motherhood and Home Training School, Michigan State College, Montana State College, North Dakota Agricultural College, Oregon Agricultural College, Ohio State University, Purdue University, State College of Washington, and the Universities of Arkansas, Iowa, Kentucky, Maine, Minnesota, Missouri, Nebraska, Nevada, West Virginia, Wisconsin, and Wyoming.

schools, seniors or juniors in three schools, juniors in two, juniors or sophomores in one, and as an elective in one. The usual amount of credit given was three or two semester hours, or three quarter-hours. In seven of these institutions[7] students received credit for observation of children in addition to credit received for attending lectures. In five of these schools no opportunity for observing children was offered; in ten, nursery schools, in four, home management houses were available for observation; in four, contact with children was made in homes or through agencies.

It is interesting to note that fifteen of the twenty-two courses required psychology as a prerequisite; ten required foods, nutrition or dietetics; only six required both.

A study of the outlines of eighteen of these courses showed that four dealt predominantly with the physical care of the child, nine with the mental and behavior aspects of child life, while five devoted approximately the same amount of time to each. A typical course of thirty-two lectures, set up from a composite of the eighteen course outlines submitted, would divide the lectures into topics somewhat as follows:

Topic	*Lectures*
History and Survey of Child Care Movement	1
Social Responsibilities and Rights of Children	2
Relationship of Heredity and Environment	1
Prenatal and Maternity Care	5
Physical Care, Diet, and Growth	6
Mental Development	5
Mental Hygiene, Behavior Problems, and Management	7
Sex Education	1
Problems of Adolescence	1
Family Relationships	2
Educational Material, (plays, books, stories, etc.)	1

It was evident that "the courses in child care and child training are in a stage of transition and . . . . although many have been given, primarily with reference to physical care, increasingly behavior adjustments and mental hygiene are being emphasized. It is probable that in most institutions there will ultimately be two courses, one dealing with child care and its physical aspects, and the other with child training and behavior adjustments."

[7] Iowa State College, Merrill-Palmer School, Michigan State College, Kansas State Agricultural College, Ohio State University, University of Minnesota, and Cornell University.

A study of the bibliographies used for child care and training courses at that time (June, 1926) showed that there was relatively little material available in printed form as to the value of which there was agreement among teachers of child care and child training.

The possibilities of developing a series of courses were also discussed, with the result that the following program of subject matter was proposed as a possible major course occupying the full time of the student for one term or for one semester:

I. Physical Growth and Development
   1. Maternity and Infant Care
   2. Physical Growth of the Preschool Child
II. Mental Growth and Character Development
III. Educational Methods for Young Children (in this, since the subject matter was growing rapidly at that time, it was thought wise to propose no crystalized methodology)
IV. Environmental Aspects

Two types of laboratory experience were proposed: the one offering opportunity for observation and practice with preschool children in nursery schools where personality studies, studies of general reactions, and case studies could be made; the other offering opportunity for observation in juvenile courts, infant welfare societies, and observation and possible practice in orphanages, kindergartens, habit clinics, day nurseries, and home-management houses. It was the sentiment of the group of teachers of child care and child training that at least one organized group of children—a nursery school or its equivalent—should be available wherever a child training course is given.

One section of the Minnesota Conference discussed the problems which arise when a child in a home-management house must be cared for by a rotating personnel. These included the problem of providing companionship for the child, of providing contact with men, and other problems, the discussion of which showed keen awareness on the part of those attending the Conference of the difficulties involved in using children in home-management houses for the purpose of training preparents, and of the need of studying these problems.

The joint meeting of both conference groups brought together the following recommendations:[8]

[8] Quoted: *Bureau of Education Bulletin,* 1927, No. 17, p. 61.

From the Committee on Findings of the Child Training Conference:

1. The minimum in child care and training should be a course carrying three semester credits, offering some opportunity for laboratory observation and open to junior and senior students.

2. This course should be supplemented when possible by a course in methods and materials for the preschool period.

3. The course now offered in colleges should be correlated with courses offered in related colleges or departments, and, if necessary, new courses should be organized to cover the aspects of child care and training previously stated: (a) physical growth and development, (b) mental growth and character development, (c) education, and (d) environmental factors.

4. Courses in child care and training should not be undertaken unless it is possible to maintain high standards of work, staff, and equipment in all child training projects in order that paramount interests may be safeguarded.

From the Conference on Children in Home Management Houses:[9]

3. That in the home management house, the student be given the maximum opportunity to initiate and carry out the plan for organization for living in the family group.

4. That the family group in the home management house should include children unless an institution finds better means of providing this experience.

3. The Development of Child Care Work, With or Without Laboratory Facilities, in Junior and Senior High Schools

As recently as 1924 little information about public-school courses in child care was available. The United States Children's Bureau reported that three states had plans for such work, but inquiry showed that the plans were still unformulated or correlated with other subject matter.

In February, 1925, the United States Bureau of Education reported three cities in which child care classes were conducted, one of them the class in the Highland Park High School described earlier. In the same year the Children's Bureau reported four states having definite programs of work in child care.

From this point, however, the development of courses in child care in junior and senior high schools was rapid. "A Survey of Public School Courses in Child Care" made by Dr. Lelah Mae

[9] Only 3 and 4 are quoted, since the others do not directly concern preparental education.

Crabbs and Mrs. Mabel L. Miller, of the Merrill-Palmer School, begun in February, 1926, and published in May, 1927, shows that more than half of the states included child care in their state courses of study for 1926. The transitional state of the child care courses at that time seemed to these writers to indicate a concerted effort toward improvement.

IV. Present Status of Preparental Education in America

In view of the exceedingly rapid growth of preparental education in the past two years it must be realized that a comprehensive account of the present status is impossible here. The best data which have been compiled in this connection are probably to be found in three recent studies.[10] Free use is made of these studies in the following section of the discussion of preparental education, and occasion is taken here to acknowledge their great value.

1. Preparental Education in Elementary and Secondary Schools in the United States

a. Extent. The results of a questionnaire sent by Crabbs and Miller to the forty-eight states in February, 1926, showed that child care work was included in the state courses of study in twenty-seven states, that child-care courses were conducted as state-wide programs in seven states, and that child-care work was included as a unit in some other course in thirty-eight states. The work was offered under vocational home economics in twenty states and under general home economics in twelve. The total number of schools of elementary and secondary rank reported by state departments of education as offering child care work was 967, although an exhaustive survey would doubtless have revealed a considerably larger number.

Reports from forty-eight state and two territorial home-economics supervisors, in 1927-1928,[11] indicated that the number of

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[10] Crabbs, Lelah Mae, and Miller, Mabel L. *A Survey of Public School Courses in Child Care for Girls.* Merrill-Palmer School, May, 1927.

Richardson, Anna E., and Miller, Mabel L. *Child Development and Parental Education in Home Economics—A Survey of Schools and Colleges.* American Home Economics Association, Baltimore, Maryland, May, 1928.

Whitcomb, Emeline S. *Typical Child Care and Parenthood Education in Home Economics Departments.* U. S. Bureau of Education, Washington, D. C., 1927.

[11] Richardson and Miller. *Op. cit.,* Section III, Day Schools.

states offering courses in child care had increased to forty-six and the number of day schools offering such courses to 2250, with the probability that not all courses were reported, even so.

b. Title of Course. "Child Care" was, in 1926, the name of the course in 72 percent of the courses reported, and "Child Training" in 17 percent; other names used were: "Mothercraft," "Infant Hygiene," "Little Mothers' League," "Child Welfare," "Home Nurse," "Child Nurse," "Child Nurture," "Home Craft," and "Junior Nurse." The course was required in 58 percent of the schools replying to the questionnaires. This predominance of the name "Child Care" or of "Child Care and Training" was still obvious in the later survey.

Little Mothers' classes under the Sheppard-Towner Act were given in 1925[12] in twenty states to 1362 classes with an average enrollment of twenty-one pupils—a total of approximately 28,602 pupils.

Reports from Mothercraft, Red Cross, and Little Mothers' classes gave an approximate total of 71,754 school pupils who received child-care courses presented by these three agencies during a period of one year.[13]

c. Grade Placement. An analysis of seventy-three replies to questionnaires received from school officials[14] showed that child care work was presented in three schools in the sixth grade, in fifteen schools in the seventh grade, and in eighteen schools in the eighth grade. Thirty-two percent offered it in the ninth grade, 31 percent offered it in the twelfth grade, and 29 percent in the eleventh. A number of schools offered the work in both junior and senior high schools. Ninety-eight percent of them offered it in home economics departments.

Partial courses were given in 1927-1928, with further distribution similar to the foregoing report, with the exception of a considerably larger proportion of part courses given in the eighth grade.

In an attempt to decide when child-care courses should be given, Crabbs and Miller offer the following data[15] regarding marriages, school attendance laws, and the persistence in school:

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[12] Crabbs and Miller. *Op. cit.*, p. 18.
[13] *Ibid.*, p. 23.
[14] *Ibid.*, p. 24.
[15] *Ibid.*, pp. 25-30.

(1) There is no minority age limit for marriage in 17 states, and the legal marriage age in 9 states is 12 years for girls and 15 years for boys.

(2) Last year there were 3000 marriages of couples under 15 years of age. Thirteen percent of native American girls marry between 15 and 20 years; 6 percent of American girls of the first generation marry between the ages of 15 and 20 years, and 30 percent of non-college women marry before 23 years of age.

(3) Interesting statistics from a few states regarding age of marriage show that there are legally married: 13,000 girls 15 years of age, 50,000 girls 16 years of age, 1,600 boys 15 years of age, and 3,000 boys 16 years of age.

The 1920 census shows the percentage of the entire number of girls of each age in the United States who are married to be:

15 years old 1%	17 years old 10%
16 years old 4%	18 years old 19%

(4) The girl who stops school at the 7th or 8th grade will have three or four children; the girl who finishes high school will have two, while college graduates average from .35 of a child (Bryn Mawr) to .95 of a child (Mt. Holyoke) according to averages shown by statistics.

Attendance at school is required:

In 5 states to age 18	In 3 states to age 15
In 2 states to age 17	In 6 states to age 14
In 32 states to age 16	

(5) The estimated distribution of pupils by grades, in public schools only, is for 1922 as follows:

Elementary School		High School
1st Grade 21%	5th Grade 12%	1st Year 42%
2nd Grade 14%	6th Grade 10%	2nd Year 27%
3rd Grade 14%	7th Grade 9%	3rd Year 18%
4th Grade 13%	8th Grade 7%	4th Year 13%

(6) The large majority of children leaving school do so in the 5th and 6th grades and at the age of 14 years. As high as 74 percent of the children receiving working permits have not gone beyond the 5th grade.

The fact that almost twice as many native American girls as American girls of the first generation marry between the ages of 15 and 20 years is interesting, because several schools have reported that the course seems especially necessary for classes of foreign girls who will soon be married.

The more frequent early marriages in small towns and rural districts raises the problem of presenting child-care courses in schools where teachers are already burdened with full programs. The Red Cross nurses are giving courses in many of these communities.

Table X shows that in 67% of the States school attendance is required until the child is 16 years old. This fact would seem to eliminate the difficulties accompanying the presentation of child care courses to those who will need them most, but the distribution of pupils by grades, in public schools only, and the fact that 74% of children receiving work permits have not gone beyond the 5th grade, are contradictory and again raise the question of training students in child care during the earlier school years.

d. Time Allotment. Of twenty-eight school officials nine reported[16] that students were given laboratory work in connection with the child-care course to the extent of two to two and three-quarters hours per week, and four to the extent of five hours per week; the average was about two and one-half hours.

In 1927-1928[17] the average length of the course was ten weeks (classes meeting five times per week for periods from 60 to 80 minutes in length)—another indication of the rapid growth of interest in child care and training in elementary and secondary schools.

e. Laboratory Facilities. Laboratory facilities were secured[18] in baby clinics at eighteen schools, in home at seventeen schools, in primary grades at ten, in children's hospitals at seven, in day nurseries at six, and in nursery schools at four schools; some schools, the figures show, made use of several of these types of laboratories. Reports from Richardson and Miller[19] show that 1620 schools in thirty-four states and 275 schools in thirty-six cities offered some plan by which girls may have contact with young children—children brought to school, contact with primary grades, and children in the girls' immediate environment being the most frequent. Sixty-six percent of the supervisors in home economics reported[20] some form of contact with young children—a figure which in all probability indicates an increase in laboratory facilities between 1926 and 1928. This does not mean, of course, that such laboratory work is always adequate in amount or is adequately supervised, but it does indicate an acceptance of the principle that classroom teaching of child care should be supplemented by practical contact with children.

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[16] *Ibid.*, p. 30.
[17] Richardson and Miller. *Op. cit.*, p. 18.
[18] Crabbs and Miller. *Op. cit.*, p. 33.
[19] Richardson and Miller. *Op. cit.*, p. 18.
[20] *Ibid.*, p. 30.

f. Textbooks. Of the seventy-three schools answering questionnaires[21] about use of textbooks, 35 percent used a regular text (listing twelve different books used),[22] 32 percent used no textbook, while 22 percent used references (listing twenty-two different books), and 21 percent used pamphlets.

g. Equipment. Twenty-five schools reported to Crabbs and Miller[23] special equipment in use for the child-care courses, the cost of which ranged from $3 to $1600; the cost in twenty-three schools was $100 or less, in one school $300, and in another $1600.

h. Teacher Qualifications. Seventy-three answers[24] to the question "What special qualifications has the teacher for presenting courses in child care?" showed that twenty-five teachers had training in home economics; twenty had special courses about children; sixteen had nurses' training; sixteen were listed simply as 'university graduates'; eleven (less than one-fifth) had had practical experience with children.

In the Richardson and Miller report there is a similar distribution[25] of training, showing the same outstanding lack of practical experience with children. There is hope that this defect of training will be less conspicuous as programs for professional training in teaching of child care, discussed elsewhere in the Yearbook, have had opportunity to place in teaching positions in elementary and secondary schools women especially trained for the work and possessed of practical experience with children.

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[21] Crabbs and Miller. *Op. cit.*, p. 34.

[22] This list is as follows:

Author and Title	*Times Reported*
Hasbrouck, Handbook for Teachers of Infant Hygiene Classes	9
Cooley and Spohr, Household Arts for Home and School	2
Dickinson, Children Well and Happy	2
Kimber, Book of Nursing	2
Red Cross, Home Hygiene and Care of the Sick	2
Aikens, Home Nursing	1
Bundeson, Our Babies	1
Cleveland, Training the Toddler	1
Grove, Wholesome Childhood	1
Marsh, Home Nursing and Infant Care	1
Michigan Little Mothers' League Manual	1
West, Child Care	1

[23] *Op. cit.*, p. 38.

[24] *Ibid.*, p. 40.

[25] Richardson and Miller. *Op. cit.*, pp. 34, 35.

i. Content of Courses. Analysis[26] of the subject matter of seventy-three courses offered showed that 94 percent of them included physical care and clothing, 88 percent habit formation, 87 percent physical development, 55 percent mental and social development, 49 percent prenatal care, and 43 percent heredity and reproduction of life. Other topics included with increasingly small frequency are: emotional development, child psychology, nutrition, play, story telling, discipline, behavior problems, books, fears, national marriage laws, qualifications for parenthood, and toys—the last six topics included in only one course each.

The emphasis on the physical care of the child is clear, a fact corroborated by Bureau of Education Bulletin, No. 17, and by the study of Richardson and Miller. It is interesting, in the light of the tendency of child care and training courses of college and university level (as reported at the Minnesota Conference on Child Training Courses discussed in the preceding section), to note the predominant and increasing emphasis upon the mental and social aspects of child life. Perhaps a more desirable balance of subject matter in elementary and secondary school courses may be expected as teachers with better balanced training can be obtained.

One city high school describes[27] a "Home Craft" course which is required for graduation of all boys in the junior year. This course, which is given in combination with physical education, includes among other homemaking units a unit in child-care which covers responsibility of parenthood; care of little children—physical, mental, moral; the boy's responsibility for the care of little ones; present-day problems in education and training of children; cost of children.

2. Child Care in Part-Time Schools

a. Extent. Of the fifty state supervisors and the ninety-one city supervisors questioned by Richardson, forty-seven[28] of the state and forty of the city supervisors sent information about part-time schools. Seven states reported a total of 137 schools, and seventeen additional schools were reported by fourteen cities, making a total of 154 schools. The enrollment reported by six states showed 38,165 girls receiving work in child care.

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[26] Crabbs and Miller. *Op. cit.*, p. 41.
[27] Richardson and Miller. *Op. cit.*, p. 41.
[28] *Ibid.*, Section VI, pp. 43 f.

b. Description of Courses. "Child care" is, as in the case of other types of schools, the most usual name for the part-time classes teaching material about children.

These courses, though often brief, are usually very practical, since a large proportion of the part-time girls are caring for little brothers and sisters or acting as assistants in homes or elsewhere where care of children is one phase of their duties. Most of these girls go to school two half days a week; two hours are given to home-making, one unit of which is child care. The general purpose of the courses is to develop an interest in and an appreciation of children and to teach the care of younger brothers and sisters.

There is in these courses an even greater predominance of emphasis[29] on the physical care of children than in the classes for the full-time students.

It should be noted in this connection, however, that at a conference of teachers of part-time schools held in one city the topic of mental hygiene for children was discussed and recommendations made for the formulation of subject matter for part-time classes in child care.

c. Contacts with Children. "It is a striking fact that although the amount of time devoted to child care work is very limited, only one state supervisor reported that contact with the children was not provided. Nine state and five city supervisors reported that such provision was made."[30]

The usual type of laboratory contacts prevailed, viz: visiting kindergartens, day nurseries, children's hospitals, baby and preschool clinics, and observing siblings at home. This last type of contact is unusually frequent, probably because siblings are present in an unusual proportion of homes of girls who attend part-time classes.

d. Qualification of Teachers. Teachers of 83 percent[31] of these part-time classes were persons trained in home economics who had not been selected on the basis of special training for child care work,

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[29] Of a course to girls in a foreign community, it is said (p. 45): "Emphasis is placed on physical care for we must combat the idea that a certain number of children must die anyway, no matter what care is given. We teach feeding the children something more than chili and beans and continually urge that parents use public health agencies for the physical and intellectual welfare of the children."

[30] *Ibid.*, p. 49.

[31] *Ibid.*, p. 50.

although some of them had had work in home management, nutrition, sociology, or psychology. One state reported that a child specialist offered their courses in thirty part-time schools; one city uses a doctor who has had home economics training, and a number mention the assistance of the school nurse, physician, minister, librarian, social worker, and kindergarten teacher.

e. Content of Courses. Suggestions for the teaching of child care to girls in general continuation schools through related work may be cited here. For a group of "home permit girls," thus named because they were unable to attend school on account of home conditions, very often because they must care for the younger members of the family, avenues of approach were:

Thrift—how to teach saving and wise spending to children.
Arithmetic—cost of feeding and clothing a young child.
Civics—habit clinics and community life.
English—the child in relation to the home and to other children, the child's responsibility in the home.
History of child training.
Geography—child training in other countries.
Personal hygiene—physical and mental (including habits, imitation, love of praise, curiosity, and ownership).
Family relationships—the vital importance of home and family to the preschool child and the relationships within the family, as they affect the child's attitudes.

Another school offers a unique homemaking course in which the central theme is the planning of a home that will give to the child the best environment for his development. "The lessons are arranged in sequence, beginning with a consideration of the function of the home, newly married people establishing a home, married women in vocational occupations, the coming of children, sex education, adolescence, pregnancy, confinement, care of the new-born child, care of the child from one to five years of age, food for the family, children's clothing, needs of childhood, family relationships, and mental and moral development of the child. Economy of time and labor in its relationship to child care and training is also emphasized throughout this homemaking course."[32]

3. Typical Child Care and Training Projects in Elementary Schools and in Junior and Senior High Schools

Bulletin No. 17 of the Bureau of Education, Washington, D. C., contains reports upon several typical child care and training projects in elementary, junior, and senior high schools. Summaries

[32] Richardson and Miller. *Op. cit.*, pp. 54 f.

of a number of these reports are given here. The reports of the Highland Park, Michigan, project and of the work at the Liggett School, a private high school in the city of Detroit, which are included, were written especially for this publication.

a. *Typical Child Care Courses in Elementary Schools. In Faribault, Minnesota,* all seventh-grade girls take an 18-week unit of work in child care and training. The text used was prepared by the Minnesota State Board of Health for this course. It stresses the health side of child care from infancy to the school age, but also includes some discussion of habit and character training, amusements, clothing, and the family, community and state opportunities for promoting the welfare of the child.

Holland, Michigan, offers a slightly different course in home crafts. This is a 10 weeks' course developed for girls in the eighth grade, as many of the girls spend part of their out-of-school time taking care of babies or young children. The girls study the hygienic care of the baby, with lessons on environment, cleanliness, food, clothing, development of the baby, and food for children up to five years of age.

b. *Child Care Course in Elementary and Junior High Schools Using a Day Nursery. Los Angeles, California,* has 16 or more day nurseries under the jurisdiction of the city board of education and supervised by its department of home economics. An English-speaking woman trained in the care of children is in charge of each nursery and is assisted by girls in the home economics classes of the elementary and junior high schools. In this work the girls learn to prepare and serve food to the children, to care for and amuse them, to make and launder the children's clothing, and to keep the nurseries clean and comfortable. This experience in the care of young children has an immediate practical value, as many of them are caring for young brothers and sisters in their own homes.

c. *Typical Child Care Courses in Junior High Schools. In Oakland, California,*[33] in 1917 a group of teachers began the development of a course in general science for the newly organized junior high schools of the city. Many of these schools were "Neighborhood Schools," in industrial districts with a large foreign-born population. The schools in some instances conducted day nurseries, and were the local centers of community life, providing recreation facilities and health centers. A general science course for such schools could scarcely be expected to conform to the conventional type. From the first, every aid and encouragement was given by Dr. Fred M. Hunter, Superintendent of Schools. The hygiene requirements for the seventh and eighth grades were to be met by the science work. In studying nutrition, one of the

[33] Written by Dr. Edna Bailey, Department of Education, University of California, for the Yearbook. The work in senior high schools in Oakland is described further on.

teachers discovered that the growth records and feeding problems of the babies attending the Well Baby Center in the school cottage afforded the most fascinating material for teaching seventh and eighth-grade pupils many things about themselves. This discovery was adapted by other teachers to their own situations and opportunities, in all of which it has proved most fruitful. The study of childhood was soon extended to include other factors influencing growth. Recently, increasing emphasis has been placed on the mental hygiene factors in a child's well-being. Less time has been spent on bathing the baby and the selection of the best kind of nursing bottle, more time on the psychology and physiology of habit formation. Interest has been directed toward gaining knowledge and experience which would help these young people to understand themselves.

These units dealing with child care and related topics have been used in the newer junior high schools in sections of the city where economic conditions are more favorable and cultural background richer. They have proved quite as valuable here as in the less fortunate districts, so far as helping pupils to self-comprehension is concerned. Babies are not so plentiful; there are no nurseries in the schools; and it is in consequence much more difficult to provide opportunities for direct observation. Use has been made of mothers within a few blocks of the school, who will permit "field trips" to watch the baby's morning toilet or his afternoon play. This has never been as satisfactory as the nursery work, but it has been amazing to find how much life and interest a single exposure to a real baby will inject into a science class.

The "Baby Books" which have been kept by the pupils' own mothers have proved a mine of fascinating material. Various health and social service agencies have coöperated by permitting field trips and sending workers to give talks on local conditions and by lending exhibits and other teaching material.

In the Continuation School this work has yielded excellent results. Some of these girls are already married; many are engaged, and many others are caring for younger children. The work with this group is modified to fit the greater maturity and heavier responsibilities of these young women.

In *New York City* junior high schools which have home-making apartments use a large hospital doll or a real child for demonstration purposes in their child care courses. Schools without homemaking equipment work with the younger grade children, weighing and measuring them and teaching them health habits by means of pictures and charts. Many of the girls take care of young children outside of school and their experiences are discussed in the classroom to stimulate interest and also to impart information as to what care young girls can give to preschool children.

The *Cleveland, Ohio,* junior high schools have series of lessons on child care and training, two for the seventh grade, three for the eighth

grade, and ten for the ninth grade. These progress from series of lessons on how to keep children clean and happy and how to feed them, to the longest series which takes up food for children at various ages, feeding habits, and standards of cleanliness, recreation and amusement.

A *Denver, Colorado,* survey of the home activities of 5106 junior and senior high-school girls, including interviews with 850 parents, showed that 29 percent of the girls shared in the care of preschool children. Seventy-eight percent of the parents interviewed recommended courses in child care and training for these girls. This study resulted in a course, "Help with Young Children," for all beginning eighth-grade pupils in the junior high school. This course takes up personal cleanliness, health habits (including food, sleep, fresh air, and exercise) and the recreation and entertainment of young children (including ways of dealing with them to develop good traits and prevent undesirable ones). The senior high-school girls may take an elective course in homemaking and child care.

Wisconsin seems to be the only state in which the bureau of child welfare of the state health department, coöperating with the department of public instruction and vocational education, has introduced a course in infant hygiene into the regular course of study set by the state. The course may be offered as part of the home economics, physical education, or physiology and hygiene courses. Most city schools include it with the home economics instruction, while rural schools usually give the work as part of the physiology and hygiene course for the eighth grade.

All students who have had 10 hours of work in infant hygiene and a demonstration of bathing the baby and preparing a bottle food formula, and who pass an oral or written examination on the subject with a grade of 70 percent or better, are awarded a semi-formal diploma which entitles each girl to be called one of "Wisconsin's Little Mothers." In 1926 these diploma requirements were met by the girls in 30 of the 44 vocational schools.

Where feasible, the ten lessons are demonstrated, and standardized equipment for this is recommended by the state as part of the school property in every school where the work is given. This equipment includes a hospital doll, an open-front layette, equipment for bathing a baby and for preparing an artificial food formula, and a basket bed.

Six of the eleven state normal schools give the infant hygiene course in full; the remainder give a portion of it. Of the thirty-one county rural normal schools, thirteen give all the work, fifteen a part of it, and three whatever the state organizer of the work is able to offer on her visits. In twenty-one high schools with teacher-training departments seven give all the work, five give a part of it; the remainder have what the state organizer has time to give them. Thirty-one rural schools, three county schools of agriculture and domestic science, and the state schools for the blind and deaf give the entire course; many others lacking equipment for demonstration, give part of it.

d. *Child Care Courses in General High Schools.* The nursery school at Highland Park, Michigan,[34] is a laboratory for the department of child care of the high school. Since the nursery school is necessarily an expensive project because of the limited number who derive benefit from it, it took some little time to get established. The Merrill-Palmer School made the start possible by furnishing a teacher and, for two years, an assistant teacher, beginning with December, 1924. In the fall of 1927 the Highland Park Board of Education felt that they were ready to assume the financial responsibility, and now, as a part of the public school system, it is financed by the Board of Education. While a fee of $10.00 per month is paid by the parents of each child, this only partly covers the cost.

The nursery school is equipped to accommodate seventeen children at a time. A substitute list is maintained from which to draw when children are to be absent for a time. Children are taken as near two years of age as possible and kept until they enter kindergarten. In addition the nursery school has enrolled a baby, so that in teaching child care the work can begin, not with the two-year-old, but with the infant.

The primary object of the Highland Park nursery school is to furnish a laboratory for the training of future mothers, through actual participation in the care of little children. If one of the objectives of education is to train for worthy home membership, it seems the responsibility of the public school to furnish the means of giving this training in preparation for motherhood.

In Highland Park the department of child care is a separate department, and the course is planned to supplement the work given in the home economics department. The head of the department of child care, Miss Alice Rebecca Wallin, is trained in home economics and child development. She supervises the activities of the department and does the class teaching. In charge of the little children is Miss Elna Jensen, trained at the McMillan Open-Air Nursery School of London. There is one voluntary worker, a high school graduate, and in addition a school nurse and a physician who give part-time service.

According to the present plan students from the senior or junior classes are enrolled in child care. They all have a background of home economics training. These girls are scheduled for a fifty-minute class which meets once a week. For laboratory experience they are scheduled for the nursery school for seven periods, or all the school day with the exception of two periods when the children are asleep, once each month.

Five students are scheduled for the nursery school at one time, and regular laboratory duties are assigned in rotation; so they have different studies each time, and a wide variety of contacts. They help supervise the cloakroom when the children first come in the morning, assist in the washroom when needed and help with the various plays, games, and

[34] This report was written for the Yearbook by Miss Wallin, of the Highland Park Nursery School.

domestic activities. They supervise the table setting and eat with the children. In turn they prepare the food for the baby and bathe him. All of this is carried on under the skilled supervision of a trained teacher. One point credit toward graduation is given for the work.

During the laboratory period, in addition to the assigned duties, the students have an opportunity to make a study of individual children and to make comparisons of the capabilities of children at different ages. They make reports of their observation on the kind of indoor and outdoor material chosen by the child; his ability in rhythm, language, and reasoning; his imagination, concentration, emotional and instinctive reactions, disposition, leadership, initiative, and habits. The students are required to make a report of observation of one of the younger and one of the older children.

In the weekly meetings of the classes in child care the discussions are led along various topics pertaining to problems in child training. Such topics are included as the development of the preschool child, physical, mental and social; habits and habit training and those problems in habit training which become behavior problems. Problems of discipline together with obedience and punishment, the emotional life of the child, play as education, stories and music in the life of the child are all brought up for discussion.

In their contact with the infant the students all have the opportunity of seeing the demonstration of the baby's bath given by a nurse. Then in turn they are assigned, at the nursery school, to bathe the baby, prepare the food, and to do the many things necessary for the comfort and well-being of the infant. They discuss the clothing required by the infant, (a layette is used for demonstration) and the general factors which enter into the welfare of the baby. The students have the opportunity of hearing a woman doctor talk on prenatal care and, later on, see the doctor give a physical examination of a little child.

While no adequate textbook has been found suitable for instruction in child care, Groves's *Wholesome Childhood* is put into the hands of each student, as well as a collection of typed material prepared by the teacher in charge. The students are assigned individual readings to be done in the school library which has a very good collection of books on child training.

In the fall of 1928 the school hopes to offer a course in "Family Life" to those girls who are planning to leave school before graduation. Included in this course will be a unit on child training. While the nursery-school facilities are at present inadequate to allow for a greater number to work with the little children, these girls will be given an opportunity to observe the children there. In this way they will enlarge their experience and learn through observation satisfactory methods of dealing with problems connected with the little child.

In the *Oakland, California,* schools[35] during the war years, the junior Red Cross organization worked under the direction of Mrs. Sue L. Fratis. Three city high schools 'adopted' three nurseries in nearby neighborhood schools, contributing needed equipment, small luxuries, and funds enough to provide good care. It was felt that charitable money-raising and spending was not a proper function of an educational system; that contacts between these clubs and their projects must be such as to yield educationally valuable material. The social service clubs studied their chosen nurseries, decided what was needed, raised the money, spent it, and brought back to their various classes the experiences acquired in the course of these projects. It soon became evident that there was room for much personal service to these institutions. Boys from the Fremont High School worked with a delegation from the labor unions on a Saturday afternoon to build a wonderful sleeping porch for their nursery; girls from Fremont came over at ten every morning to help with baths when the nursery was overstocked with very little babies; Oakland High girls told stories to little groups while their boy friends built a sandbox; Technical High proudly displayed the new nursery cottage, complete even to wall decorations, toys, and marvelous painted furniture. Girls and boys came to help the busy nursery matron in the afternoon playtime. Some of us who have watched these things since 1918 have yearly expected enthusiasm to wane, fickle interest to swing to some other quarter; but to date there has been found no more fascinating toy for a vigorous and ebullient high school than a nursery which it regards as "all its own."

All of this work has been done without credit by students and without pay by the teachers who were back of the clubs. It was valued highly by all concerned as a chance to see certain aspects of life at close quarters. In social problems classes students have frequently drawn on their experiences in the nurseries to make a point in the class discussion. A group of juniors discussed most scathingly the proposed budget of the Community Chest, proceeding on the basis of what "their children" needed and were likely to need, and displaying keen interest in a set of dull figures, passed over without question by most adults of the community.

For the sake of the attitude of students toward the nursery it is well to give high-school students a good deal of responsibility, under intelligent guidance, for their own nursery laboratories. The scheme of interior decoration, the actual purchasing and placing of needed materials, the upkeep of bibs and washcloths and blankets and pinafores, flowers and pictures, the choice and purchase of play materials, are within the scope of their abilities and interests. Our first hint that boys were interested in child care came from the very natural manner in which the girl who was chairman of the committee on outdoor play materials called

[35] Written for the Yearbook by Dr. Edna Bailey, Department of Education, University of California.

on her boy friends for aid. The result was that the boys took the whole matter out of her hands. These same boys later made a model of a backyard playground for a local child welfare exhibit which won "distinguished commendation." It is now taken for granted that the nurseries are quite as much the concern and responsibility of the boys as of the girls.

The chief drawback to these projects has seemed to me to be that the load of money-raising for initial equipment and remodeling was too heavy. This bore harder on the teachers than on the students, but called for more effort from both than could be justified educationally. In one case, the nursery started with one very inadequate room and was literally built and equipped by student aid. In another, the cottage was given, but had to be moved seven blocks and completely made over. Now that these initial difficulties are surmounted, the financial problem is much less acute. Another undesirable feature is the distance of the high schools from their chosen nurseries. Of the total time devoted to the project, far too much has had to be spent in travel.

Any attempt to give academic credit for such activity would probably result in formalization and a speedy withdrawal of students from active direction of the enterprise. On the other hand, the greatest usefulness of these projects can only be realized when all the teachers, especially in social studies, science, and English, are in close touch with the experiences which the nursery is bringing to students, and on the alert to capitalize them in regular class work.

Any brief statement concerning these nurseries is bound to be inadequate, because forced to ignore the many other factors and people involved in their establishment and maintenance. Especially should be mentioned the work of the visiting teachers and school nurses attached to each neighborhood school, without whom neither school health center nor nursery could have been conceived or maintained. Their willingness to work with the high-school youngsters has developed an extensive program centering around the nurseries. This has been especially strong in the schools connected with nurseries, rather than in the high schools. No attempt is made here to describe this phase of the work, which has had many admirable developments. The art departments have also capitalized the opportunities for decoration and home-planning.

A third type of education in child care has developed in connection with senior-high-school classes in physiology in the University High School. This work is recognized as a science of senior grade. The study of metabolism, growth and development, and reproduction is the first semester's work. Records of growth of litters of rats and guinea pigs were kept, and growth curves plotted. The president of the city federation of Parent-Teacher Associations saw some of these graphs, and asked the class for aid in keeping track of the growth of a group of kindergarten children who were being given free milk by the Association. Definite information as to the value of this gift was very much desired,

but no teacher or nurse had the time to keep the records and make the study. This was adopted as a class project. Four students took one double period a week for field work. This enterprise has flourished for four years, and yielded returns beyond anything dreamed of at the beginning. When the children whose pounds of gain had been so slowly accumulated in the spring came back in August worse off than in the previous June, the feelings of the students were unmistakable and their convictions as to the general futility of half-way measures very hard to shake. They learned that while milk may be good for all small fry, children are not to be wholly explained in terms of their food and drink, nor even of their fresh air and sleep and outdoor play. In teaching this class, every effort was made to avoid "preaching," to leave the students free to do their own thinking, but no question was ever dodged or answered dishonestly. The reactions were almost as various as the students themselves; but all were interested, and all were getting definite concrete material out of which to build their own conceptions of the growth of a human being.

Throughout the work here reported, the emphasis has been placed on knowledge and attitudes as desirable outcomes, rather than on skills and habits. To liberalize the student's conceptions, to free him from tradition, superstition, and ignorance in the field of human growth and development, has been a dominant aim, especially in the senior high school. Children are not presented to the student for study because he or she may some day become a parent. They are studied because they are intrinsically interesting, because childhood is a highly significant stage in human development, because no adult can be understood except in terms of his whole life-cycle, and finally because of the great rôle the community plays in conservation of childhood, and the responsibilities for citizenship which that rôle brings to all.

Such material and such field work as are here suggested are of great value for the vitalizing and enriching of the academic courses in which they are incorporated; their value in relation to extra-curricular activities is unmistakable and steadily increasing.

The high school at *Peterborough, N. H.,* started, in 1926, to offer five senior girls in the department of home economics an eight weeks' unit of class instruction in child care and training with opportunities to observe in the nursery school of the city. The classroom discussions took up food, clothing, medical and dental care, play; adjustment to home, playmates, school, and work; behavior difficulties, and psychopathic children. The observation work included environment, equipment and educational apparatus, physical condition and health habits, developmental program for both individual and social activities, interest, enthusiasm, and judgment in the children, the nursery-school program, and the school discipline.

4. Child-Care Courses in Vocational High Schools

The three following paragraphs are illustrative of work in vocational high schools:

In *Chicago, Ill.,* the Lucy T. Flower Technical High School offers a unit of child care and training in the last semester of the four-year homemaking course. This unit consists of five 45-minute periods per week for 20 weeks. The work includes a study of heredity, the establishment of physical health through medical supervision and hygienic living, normal home life, education, recreation, and protection against exploitation of child labor in the city and country.

A rural community vocational high school at *Lampeter, Pa.,* also offers a unit of child training and care to senior girls taking the home economics course. The unit consists of three class periods a week for one semester. The work begins with a study of housing conditions in the community, the physical care of the baby, the development of the preschool child, rural-school conditions, community health standards and prevention of disease, the training and management of the rural-school child in both physical and mental development, sex hygiene, prenatal care, heredity, child labor, and child welfare agencies.

The *Benton, Ia.,* Vocational High School has three courses in child welfare for girls from 16 to 18 years: child care and training (18-weeks unit of two 80-minute periods per week), child psychology (9-weeks unit of five 40-minute periods per week), and children's clothing (9-weeks unit of four 80-minute periods per week).

5. Child-Care Course in a Private High School

The Liggett School of Detroit, Michigan, is a private organization, meeting the needs of a large group of socially favored girls with a curriculum inclusive of kindergarten, intermediate, and college preparatory grades. The following are some of the features of its child-care course:[36]

While not primarily functioning as an educational laboratory, owing to the vision and progressive policy of its founders and leaders, the Misses Ella and Jeannette Liggett, this school has been a garden spot for the nurturing of educational projects along a number of lines, notably in the establishing of standard tests for educational measurement under Dr. S. A. Courtis. Another outstanding feature of this pioneer work was the early organization of an opportunity for the students better to understand young children, and the subsequent development of this work as a structural part of its program in the maturing of the idea of preparental training.

[36] Report made for this Yearbook by Miss Jessie Lane of the Liggett School.

The course of which the work in child care forms a unit is planned to meet the needs of a specific group, those girls who for a variety of reasons have not college entrance as a definite goal. The work toward the understanding of little children forms the culmination in the senior year of a closely correlated sequence in science and home economics, in which chemistry leads to nutrition study, or dietetics, and two years work in biology forms a background for both. Factors other than foods are considered in nutrition discussions, and the course throughout emphasizes the liberal, or cultural, rather than the vocational objective.

Two outstanding conditions control the selection and handling of subject matter. First, the group is small, never exceeding fifteen girls, so that it is fairly easy to sense the reaction of the individual to the subject matter presented, and to change the line of attack in a way not possible with a more unwieldy group. And second, as it is seldom that one of these girls has young children in her own home or any direct personal contact with them in her life, a participation in their care, or responsibility for them, is no part of her personal problem or interest. Nor are most of them involved to any degree in matters of household management. Appeal, therefore, must be made on the intellectual rather than on the practical plane. It becomes necessary to present only such topics as may lie within the mental perspective of this type of student and care must be taken that the subject matter does not become wholly abstract in its discussion, and lose applicability. When this difficulty is avoided, it is often easy to arouse a vivid interest and a new-born consciousness that an effort toward the understanding of little children is most worth while. The response has often found immediate and constructive expression in helping with groups of young children in hospital wards and social centers.

There is devoted in this course one two-hour period of laboratory observation each week in the Merrill-Palmer Nursery School, two fifty-minute hours of recitation and discussion, for each of which a definite assignment of work is prepared, and one hour of supervised study which gives opportunity for direction in the use of reference material and for personal interviews or conference.

One problem confronting the leader of such a group is the present lack of reference material suitable to their comprehension and stimulating to their interest.

The line of attack is always taken from the student's response to the situation after the first day's visit to the nursery school. This is usually on the nutritional aspect, as this falls somewhat within the girls' experience, but always their keen observations and questions open a wide variety of avenues toward desired ends.

Based on these observations, the topics attempted have become somewhat crystalized, though in open discussion a wider range of ideas is often involved in responding to inquiries on such subjects as heredity, results from contrasting environments, social responsibility, etc.

The formal work can be included under the following heads, with the practical, easily observed points of the nursery-school regime coming in for first discussion:

1. Food for children from 2 to 5 years: the mental as well as the physical aspects of the problem:
   a. Balanced diets for three days
   b. Hours of feeding
   c. "Don'ts" for adults
   d. Application or modification to the child's needs of principles handled during earlier nutrition study.
2. Outdoor play: learning by experience; naps; clothing; toys.
3. The mechanics of the nervous system.
   a. Laboratory work with frog
   b. Simple tests for reflexes
4. Native endowments: (a) instincts, (b) reflexes, (c) condition reflexes.
5. Habits and habit formation (usually much and lively discussion on this topic both from the student's laboratory observation and in relation to her personal experience).
6. Development of mental faculties and muscular correlation in relation to the age of the child.
7. Use made of such developing faculties as imitation, imagination, and curiosity.
8. Relation between work and play; methods used for desirable stimulation in each.
9. Stories for children.
10. Pictures for children; correlation with art department; basis of selection for varying ages.
11. Music; response to rhythm; musical games.
12. Mental tests (one lecture), showing the desirability of establishing standards of comparison.
13. Some history of child education:
   a. Robert Owen
   b. Froebel and the kindergarten
   c. The development of the nursery school

Throughout the class work the effort lies toward an understanding of conditions necessary for the happy development of children and in rousing a sympathetic interest in the child as an individual, rather than in any experience in training children or in their physical care, which problems lie outside the daily interest or immediate horizon of girls of this age and social condition.

While as yet no effort has been made to measure the results of this piece of work under controlled conditions, nevertheless certain re-

sults are evident: notably, frequent spontaneous expressions showing a wholly new conception of the necessity for acquiring knowledge of child care, and of the importance of the application of intelligence to child development in all its phases.

6. Preparental Education in Colleges and Universities

a. Source of Information. Comparison of studies of the status of child care courses in elementary and secondary schools showed that the growth between 1926 and 1927 was bewilderingly rapid. So rapid were the changes, in fact, that a survey of the present status presented insurmountable difficulties. A survey of the present status of child-care work with the preparental group of students in American colleges and universities presents the same type of difficulty, although in somewhat less degree, since there are fewer institutions concerned. The only materials available in June, 1928, which aid in a survey of child care work in colleges and universities are Chapters III and IV of Bulletin 17 of the Bureau of Education[37] and the bulletin of the American Home Economics Association,[38] both of which have been quoted freely in the preceding section on preparental education in elementary and secondary schools.

In addition to materials found in these bulletins a special request for a descriptive article has been sent to a number of typical centers where child care is given to preparental students of college and university standing. The centers represented have been selected as types—wherever possible, as the chronologically first representative of any given type.

These descriptive articles, edited to preserve unity of form, but otherwise presented as written by the chosen representatives from each center, are appended to this section of the discussion of preparental education.

The study of Richardson and Miller, which attempted to reach only home economics departments, succeeded in establishing a contact with so many colleges and universities that it may be considered representative of the college programs of home economics throughout the United States for the academic year 1927-1928.

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[37] Whitcomb, *op. cit.*

[38] Richardson and Miller, *op. cit.*

b. General Description of Courses. It was found by these authors[39] that 93 percent of the land-grant colleges for white students offered courses in child care. Thirty-six percent of other colleges and universities, and 31 percent of the teachers colleges and normal schools, included child development as part of their home economics programs. "Child Care and Training," or "Child Care and Welfare" were the most frequent names of the courses, especially where only one course of a general nature was offered. Almost one-half of the courses were offered as training for future parenthood, and about one-fourth for professional work. Of 145 colleges and universities reporting, 60 gave a single course, 55 gave parts of courses, 21 gave a group of courses, while nine combined complete courses and parts of courses. The amount of credit offered varied according to the organization of the courses.

c. Students Enrolled. In 108 institutions the number of students enrolled for single courses was 2,032, for parts of courses 1,741, for groups of courses 1,986, and for a combination of full and part courses 540, making a total of 6,299 students in this group of institutions who had work in child care and training in 1927-1928. In the main, child care and training courses were limited to students of junior and senior standing and required as prerequisites courses in home economics, psychology, biology, and chemistry.

d. Titles of Courses. The scope of these courses in colleges where groups of courses were offered may be suggested by the titles under which they were offered:

1. Child training, child psychology, parent training.
2. Child care, child psychology, child feeding and physical care of children.
3. Child welfare, child health.
4. Child welfare, child training, preschool training, infant and maternity care.
5. Environmental factors, educational methods, mental development, behavior problems, physical growth, nursery-school techniques.

The writers suggest that the names of courses will probably undergo considerable change as the subject matter in child development and parental education is developed and becomes better organized.

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[39] Richardson and Miller, *op. cit.*, pp. 71-76.

e. Aims of Courses. Of the colleges reporting the aims of their work, almost half give "training for intelligent parenthood," one third give "to train professional workers," while more than half cited more general aims: "to develop appreciation and understanding of children" or "to develop an appreciation of and interest in the field."

"Training for intelligent parenthood" ranked second among the aims reported, and meant in most cases preparental training, as only a few of the colleges (among those with nursery schools) reported programs with parents.

f. Content of Courses. Of 114 colleges reporting on content of courses[40] sixty-four reported the inclusion of topics under physical development, eighty-nine included physical care of the child, fifty-six included environmental factors, and sixty-three included education of the child, and fifty-seven included mental development. Topics less frequently considered were emotional development, social development, moral training, and behavior problems.

g. Qualifications of Instructors. Courses were offered in seven colleges by persons holding the Ph.D. degree, in twelve by persons holding master's degrees, and in twenty-three by persons with medical training. "Although the group of highly specialized workers in this field is small, it is most encouraging that from the beginning the necessity for specialists has been recognized."[41]

h. Laboratory Facilities. Laboratory facilities were reported by ninety colleges; thirty-nine of these use public-school classes in kindergartens, practice schools on campus, elementary grades, health and nutrition classes, playgrounds, food, nutrition, and clothing classes, special schools for backward and crippled children, open-air schools, and schools for children with poor eyesight.

Community organizations, including day nurseries, hospitals, orphanages, child-caring institutions, social settlements, and tuberculosis sanatoria were used by thirty-one colleges for observation of children.

Observation and contact with children were offered by twenty-four colleges in homes in which the students kept records of food, daily routine, behavior and reactions, bathed babies with the help of a nurse, and held conferences about behavior and nutrition with

[40] *Ibid.*, pp. 70, 79, 80.
[41] *Ibid.*, p. 86.

the mothers of the children, or where neighborhood children were observed or case studies made.

Experience with nursery-school groups was offered in twenty-three colleges.[42]

Four colleges reported "special groups" which included a laboratory for children from fourteen months to three years, a preschool home laboratory, and a preschool group on the campus.

Practical experience with children was provided in twenty-two colleges by bringing children into the classroom for examination by a physician who pointed out physical characteristics, demonstration of bathing a baby, simple mental and motor tests, and parties.

Contact with children in home management houses was provided in fifteen colleges.[43]

Special studies of children, reported by seventeen colleges, included charting the weight of a nutrition-class child, supervised observation, study of a child in a girls' home or elsewhere, study of some problem child, assisting at lunch period, and having charge of children through meal-time five days per week for ten or twelve weeks.

Behavior clinics, infant welfare clinics, hospital clinics, clinics held by a physician, and school clinics furnished contact with children for students in twelve colleges.

7. Typical Collegiate and University Centers for Preparental Training

The descriptions that follow will serve to make clear the nature of activities in preparental education in (a) the University of Cincinnati, (b) Cornell University, (c) Iowa State College, (d) the

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[42] These were (see p. 83 of authors quoted): Alabama Polytechnic Institute, Antioch College, California State Teachers College at San Jose, Columbia University, Iowa State College of Agriculture and Mechanic Arts, Iowa State Teachers College, Iowa State University, Kansas State Agricultural College, Merrill-Palmer School, New York State College of Home Economics, Ohio State University, Oklahoma Agricultural and Mechanical College, Oregon Agricultural College, Purdue University, Simmons College (Ruggles Street Nursery School), Stephens College, Universities of California at Berkeley, California at Los Angeles, Chicago, Minnesota, Nebraska, Texas, and Wisconsin.

[43] *Ibid*, p. 84. These colleges were: Berea College, Carnegie Institute of Technology, Drexel Institute, Iowa State College of Agriculture and Mechanic Arts, Lewis Institute, New York State Normal College, North Carolina College for Women, Oklahoma Agricultural and Mechanical College, Pennsylvania State College, South Dakota State College, and the Universities of Arkansas, Maine, Missouri, Nebraska, and Oklahoma.

Merrill-Palmer School, (e) Ohio State University, (f) the University of Texas, and (g) Vassar College, in the order named.

a. University of Cincinnati.[44] The work of preparental education in this institution was begun in 1925, with the establishment of the Department of Child Care and Training in the School of Household Administration. The present staff consists of the professor of child care, and the assistant professor whose chief duties consist of work in parent groups, a nutrition specialist, a head teacher and two assistant teachers, a part-time trained nurse and a part-time pediatrician for the nursery group.

The approximate cost of the total project, exclusive of heat, light, housing, and telephone service is $15,600 for the nine months' year. Nine thousand dollars of this budget is paid by the Mother's Training Center Association, a group of citizens who have agreed to turn over this sum to the department annually for three years. This sum is spent mainly in parental education. The University carries the major part of the remainder of the expense. The tuition of the nursery group, which numbers thirty children, covers food, maid service, laundry, replacement of equipment, and the salary of one assistant teacher. Next year the budget will be increased by $5,000 from the Laura Spelman Rockefeller Memorial Foundation.

The plan of the School of Household Administration, in which the Department of Child Care and Training is located, is to give a background of all of the training which will be necessary in conducting a home, while at the same time it gives professional training in one or more of the fields into which home activities lead. The school has four major departments, nutrition, child care and training, management, and home economics in education and business, each of which prepares for a number of professional fields. Students take a general course during their freshman and sophomore years and their professional training in their junior and senior years, and as graduate students. The work in the Department of Child Care and Training prepares for such activities as director and assistant director of nursery groups and day nurseries; instructor in child care and training in high schools, colleges, and universities; welfare work with young children; and research in child development. Graduate students may add parental education to this above list. The electives of students specializing in child care are chosen with a view to giving fuller training in the specific field which the student wishes to enter. Students who plan to enter child welfare work choose their electives in sociology and in the School of Nursing and Health. Students who wish to become directors in nursery groups and day nurseries chose a portion of their electives in the College of Education, particularly in kindergarten education. Students who wish to do re-

[44] This report is a slight revision of the material written for the Yearbook by Dr. Ada H. Arlitt, University of Cincinnati.

search in the field of child development chose their electives in the Department of Psychology.

The courses in child care are planned to give the students an idea of the social and legal provisions for children, both local and national, of the sick child through the course in pediatric nursing and child hygiene, of the mental and physical growth of children, of behavior problems of children, and of experimental methods which may be used for the preschool period. In order to include sufficient material on the management of homes, students take courses in consumer's buying for homes and institutions. In order to be acquainted with the relation of women to the community, they take a course entitled "Woman, and Her Relation to the Social Order." A course in economics and one in problems of citizenship are also given. All of the departments in the School of Household Administration are closely related, and a student who wishes more training in nutrition or management may elect additional hours in that field.[45]

Through contact with children the students have ample opportunity for observation and participation. In the junior year the course in mental and physical growth includes a laboratory period of three hours a week throughout both semesters. Participation in everything but the sleeping-room activities is permitted during these laboratory hours. To supplement the work in the nursery group in which this laboratory is taken, students observe in day nurseries, in kindergarten, and in the Children's Hospital. Lectures on infant care, with demonstrations and participation are given at the Children's Hospital as a part of the work in this course. The course in behavior problems has a laboratory period of three hours a week throughout the first semester. This laboratory work is done in the Children's Hospital at the Psychopathic Institute, in the Central Mental Hygiene Clinic, and in the Mothers' Pension Group. Observation and participation are always under the supervision of the Professor of Child Care, or of the head teacher in the nursery group. The records of the children in the nursery group are available for study except where these contain confidential material. Students have, at least once during their junior or senior years, periods of contact with children in their homes. All records are open to graduate students doing research which requires the use of such records. The graduate work in the department follows the plan outlined for undergraduate work, but with more advanced courses. Students are required to take undergraduate work where this is necessary to supplement their previous undergraduate preparation. A course on the methods and materials of parent education is given in the Graduate School with actual participation in parent-group work.

The space for the nursery group at the University consists of a sleeping room, a playroom, approximately 32 x 40, a roof garden, ap-

[45] For the schedule of courses, see page 483, Catalogue of the University of Cincinnati, 1926-27.

proximately 55 x 60, and a toilet and washroom. Kitchen space in the dietetics laboratory is reserved for the nursery group. An office and examining room for the physician, an office for the head of the department, one for the assistant professor, and one large office for the staff of the nursery group constitute the remainder of the housing space. The equipment for the nursery group and the medical laboratory cost approximately $2,200.

The students are from both the graduate and the undergraduate schools. Twelve undergraduates and ten graduate students are now majoring in this subject. The graduate students come from teaching elementary and kindergarten education, and from the departments of Sociology, Nursing and Health, Home Economics, and Psychology. The undergraduates are students who have come through the College of Liberal Arts. In 1929-30 undergraduate students will, for the most part, have had their whole undergraduate work in the School of Household Administration.

The library facilities are those afforded by the School of Household Administration, College of Medicine, College of Education, School of Nursing and Health, and the departments of Psychology and Sociology.

Ample opportunity for research is afforded by the laboratories in these departments. All of the social agencies which do work with young children coöperate fully with the department in any research which involves their particular field. Researches have been in progress this year in coöperation with the Children's Hospital, the Psychopathic Institute, the Babies' Milk Fund Association, the Day Nurseries, and the Mothers' Pension Group.

All undergraduate work is done under the general direction of the Department of Child Care in the School of Household Administration. All graduate work is done under the supervision of the Department of Child Care and Training in the Graduate School. The department functions as an independent department of the Graduate School of the College of Arts and Sciences, as well as an undergraduate department in the School of Household Administration.

b. Cornell University.[46] The College of Home Economics at Cornell University is a state institution, and the work done through the College of Home Economics is financed largely by state and federal funds, which amounted in 1928-29 to approximately $234,497 state funds, and $83,154 federal funds. In addition to the state and federal funds a grant of $30,000 yearly for four years was made by the Laura Spelman Rockefeller Memorial to begin work in child guidance. These moneys support both resident and field work, resident teaching, research and extension.

The aim or purpose of the College of Home Economics is first and foremost the training of homemakers. In a sense, therefore, a considerable part of all its work is preparental. A second aim of the College is

[46] This report was written for the Yearbook by Miss Flora Rose, one of the two directors of the College.

vocational—to train students through home economics to earn a living in one of the fields where knowledge of subject matter of some field of home economics and skill in its application are necessary.

The College is organized on the departmental basis. The following departments have been developed: foods and nutrition, clothing and textiles, household art, household management, institution management, and family life. Each department has a head and four or more persons on its faculty. All departments except institution management have both resident and extension staff members. Three departments have, in addition, staff members whose special concern is research: these are foods and nutrition, household management, and family life.

The special responsibility of the resident members of the staff is to train students or to work in research problems. The special function of the extension members of the staff is to conduct programs of study in the field for both adults and children. In all cases, only persons having specialized in the subject to be taught in residence or in the field, or to do resident or field research, are selected. The group, therefore, is a highly specialized group.

In addition to general basic courses in home economics which are of value in homemaking, courses which may be regarded as specifically preparental are also given. In the Department of Foods and Nutrition a course in child feeding is given. It involves lectures and discussion two hours a week. Three types of laboratories have been developed for this course:

(1) Nutrition classes with children in the public schools, where the students observe and train the children and work with the parents of the children on feeding problems of school children.
(2) The nursery school, where the students observe the feeding of the nursery-school children, help in planning menus, and work with the parents of the nursery-school children on the problems of feeding preschool children.
(3) A visiting clinic organized by the instructor, comprising some fifty mothers with small babies whose feeding the students observe, and with whom the students work to help the mother in her own feeding problems or to aid in her necessity for feeding her baby artificially or for supplementing the baby's food.

In the Department of Clothing and Textiles a course in children's clothing has been organized. In the laboratory for this course students work with the children of the nursery school on the problem of children's clothing. They work on the problem of clothing for infants through the infants in the two practice houses and on the problem of clothing older children through a project with high-school girls.

In the Department of Family Life a number of courses in child guidance and child care are included which are designed specifically for preparental training. Students taking these courses have the opportunity

to observe the fifteen children in the nursery school and to work with the parents of these children.

In the Department of Household Management one course is given which involves residing in the practice house for five weeks. An infant is maintained in the practice house, and each student living in the house has a period of responsibility for the care, feeding, and training of the baby. Opportunities are being developed constantly for students to make contact with homes. These are most often made through some food, clothing, or household management problem which the mother in the home sends to the department.

The College of Home Economics occupies its own building and in addition it maintains a house for the nursery school and one outside practice house.

Students admitted to the College of Home Economics must come from approved high schools, must have satisfied what are known as the regents' examination requirements or the equivalent in College Board examinations, and must have come from at least the upper two-fifths in rank in the class in which they graduate. The number of students admitted to the College is limited and includes a maximum total of 350 students.

The majority of students express two objectives: first to prepare themselves for homemaking; and second, to prepare themselves to earn a living through some vocation which has developed through a curriculum in the College of Home Economics.

The College has at the present time eight curricula.[47]

There is a large general library in the University; the Colleges of Agriculture and Home Economics maintain a library; each department has its own small collection of books, and the Department of Family Life has a large specialized collection of books.

c. Iowa State College.[48] The Home Economics Division here offers a course in home economics to about 1300 women. There are four other divisions in the College; agriculture, engineering, industrial science, and veterinary medicine. The Divison of Home Economics has more than one-fifth of the total enrollment.

The Department of Child Care in the Division of Home Economics is financed both by the college and by a grant from the Laura Spelman Rockefeller Foundation.

Inasmuch as the keynote of the Home Economics Division at Iowa State College is homemaking, the resident program of child care and training has been organized to give senior women an opportunity to be trained in, and become familiar with, the care and training of children.

This department is barely five years old, but during the last three years there has been an increased demand from seniors and graduate

[47] See Catalogue, Cornell University, 1927, pp. 12-21.

[48] This report was written for the Yearbook by Lulu Lancaster, of Iowa State College.

students for advanced work in child care. It has also been possible to do a more extensive piece of work in the past two years with the parents of nursery-school children.

An attempt has been made to see child life in its many contacts with an adult world and to use all departments of the college which can make a definite contribution in the study of childhood problems and possibilities. Coöperating with the Department of Child Care are the Departments of Nutrition, Physical Education, Hygiene, and Physiology. Each one of these departments makes a definite contribution to the program of child study, either through actual participation in nursery-school work or in the child study seminar which is composed of all instructors working in child care.

The personnel of the staff of the Child Care Department consists of the director of the department, the child psychologist, who gives half of his time as a consultant, and two nursery-school teachers. These two nursery-school teachers are graduates of a home economics college, with advanced study at Merrill-Palmer School and at Columbia University.

The course in Child Care and Training is required of all home economics students. The prerequisites for the course are dietetics, child psychology, and physiology. About 170 students are served in the course, which consists of a three-hour-a-week lecture or discussion period and the following participation in nursery-school activities:

Assistantship	6 hours per quarter
Meal Preparation	3 hours per quarter
Nap Period	2 hours per quarter
Noon Meal	2 hours per quarter
Conference with Child Psychologist	2 hours per quarter
Conference with Nursery-School Teacher	2 hours
Observation	10 hours per quarter

In addition to this, there are a reading requirement of ten hours per quarter and two reports on nursery-school procedure and behavior of nursery school children.

The assistantship in the nursery school is supervised by the head nursery-school teacher. In the conferences with the students who are to assist, they discuss the particular responsibility which the students will have in this assistantship. Then the nursery-schoool teacher has a conference following this assistantship in which she checks up with the students and helps to evaluate their success or lack of it in nursery-school participation.

The first report that is made is an analysis of the nursery-school situation from the standpoint of the teaching methods which are used, of the equipment of the nursery school, and of the children's reaction to both teaching and equipment. The second report is an intensive personality study of one child. Students are required to make at least one visit to the home of the child whom they are studying.

Records on nursery-school work are compiled by students, nursery-school teachers, the psychologist, and the director. The nursery-school teachers keep a pad in their pockets on which to record those items of behavior that lend an insight into the study of the child. These records are carefully typed and filed and are used in the weekly conference with the psychologist and director.[49]

The Nursery School is housed in a three-story building. It has three floors and accommodates about thirty-five children, as well as providing office rooms for five faculty members. On three sides of the building is a large yard entirely fenced in. In the yard are trees, gardens, animals, and outdoor playground equipment, also a large concession tent which is used for protection from the sun during the hot summer months.

Courses offered in the Department of Child Care and Training and in Departments servicing Child Care and Training are the following:

Child Care and Training (for senior women)
Special Problems in Child Training
Special Studies in Psychology (offered in the Psychology Seminar)
Child Study Seminar
Research in Household Administration (with its adaptation to child care)
Nutrition of Children
Prenatal and Child Physiology
Children's Clothing
Home Management House
Teaching of Child Care in Public Schools
Story Telling
Playground

Realizing that no textbook will cover the needs of subject matter which the course in Child Care and Training wishes to give, the library has prepared, at our request, a list of about fifty books for reference. Three or four copies of each volume make it possible to have adequate material for reference work in the field of child care. This is in addition to a similar list which the Department of Psychology has on its shelves.

d. The Merrill-Palmer School. This school, founded as an institution to undertake the training of girls for homemaking and parenthood, was established in Detroit in 1920.[50]

Since no precedent existed to serve as guide, the first few years of work were devoted to diverse types of projects in the hope that the most effective way of executing the purpose of the will might be discovered. Three main avenues of approach seemed to open: to educate women who were already homemakers and parents; to reach younger women who

[49] For a more complete discussion of records in this nursery school, see Ch. VIII.

[50] For a description of the early history of this school and its influence on preparental training, see pages 358-360.

were not yet, but who would eventually be, homemakers and parents; and to undertake research which would discover desirable content and effective methods for use in teaching these two groups.

It seemed wise, in developing these three lines of work, to establish a nursery school in order that an opportunity for observation and participation in work with young children might be offered to the parental and preparental groups, and that a center for research with normal children might be available.

There are, at present, two nursery schools[51] on the immediate campus which care for about fifty children and which are used for both teaching of students and for research, and four nursery schools in or near the city of Detroit, all of which are used as laboratories in connection with the teaching of students. An extensive program of physical, nutritional, psychological, and educational care is maintained for the benefit of the nursery-school children, and every precaution is taken that they will gain maximal profit from attendance at the school.

Composing the campus are five buildings, all of them adaptations of large houses which had been previously used as homes, and which, for the purpose of training girls in homemaking, are considered superior to one large central building. These buildings house administrative offices, classrooms, and the two nursery schools, and furnish living quarters for all of the undergraduate and most of the graduate students in residence at the school. Coöperative living is required as an essential aspect of the training for homemaking, just as frequent and intimate contact with the children in the nursery school is required as a valuable part of the training for parenthood.

The staff numbers thirty-five, and includes several consultants, as well as specialists in physical growth and development, mental growth and development, nutritional research, parental education, nursery schools, household management, and extension.

The students in residence number fifty and are senior or graduate students from colleges and universities of recognized standing in all parts of the United States and in several foreign countries. They come for periods varying from a term to a year and receive full credit toward the bachelor or advanced degrees in their home institutions.

Undergraduate students, most of whom are majors in home economics, are required to take the following courses:

I. Mental Growth and Development of Character in Young Childhood (6 hours credit)
   4 class periods per week
   4 hours per week observation in the nursery school
   4 hours per week work in the nursery school

II. Educational Methods for Young Children (2 hours credit)

[51] For a description of the nursery schools, see Ch. VIII.

III. Physical Growth and Development of Young Children (5 hours credit)
3 class periods per week
3 hours per week laboratory and field trips
1 hour per week conference

IV. Environmental Factors of Child Life (2 hours credit)
2 class periods per week
Laboratory and field trips arranged

Graduates, who are usually majors in nutrition, psychology, parental education, or preschool education, are required to take similar courses and, if presenting adequate preparation, are permitted to take work in the following courses:

V. Home Problems (5 hours credit)
4 class periods per week
3 hours per week observation, field trips, or laboratory

VI. Behavior Problems Occurring in Young Children (2 hours credit)

VII. Mental Measurement of Children (3 hours credit)

VIII. Nursery School Techniques (throughout the year, 2 to 5 hours credit each semester)
2 class periods per week
4 periods of one full week each of work in the various Merrill-Palmer nursery schools (2 to 5 hours credit)

IX. Special Problems
Problems in the field of psychology, physical growth and development, home backgrounds, or parental education

A limited number of advanced students are offered an opportunity to do research in the psychology of young children and in nutrition.

The school does not, however, confine its attention to its university students. In order to reach the large group of young women who do not attend college, there has been established coöperation with high schools which has served to demonstrate the kind of training in child care that can successfully be given during the high-school years. The Merrill-Palmer nursery schools have been used as laboratory for these courses. Courses in homemaking for girls in continuation-school classes have also been offered.

Probably the most outstanding feature of the preparental program at the Merrill-Palmer School is the fact of close coöperation between the various teaching groups—a coöperation which has permitted the development of courses so smoothly coördinated in system and method that the student receives a closely woven unit of work designed to present all phases of child life.

e. Ohio State University.[52] Preparental education was incorporated in the program of the Home Economics Department of Ohio State University in the spring semester of 1923. A course in child care was

[52] This report was written for the Yearbook by Miss Faith Lanman, of Ohio State University.

offered in which the following subjects were included: physical characteristics, mental characteristics, child management and training, family relationships, and the child in relation to the community. The various phases of the subject were treated in survey style to give point of view rather than detail. Various specialists contributed to the course —a pediatrician, psychologist, child management specialist, and several members of the home economics staff.

As a laboratory for this course the department opened a nursery school in February, 1925. A part of the home economics building was utilized for this purpose; the total floor space covers 2,500 square feet. The initial cost of equipment was approximately $1,000. The enrollment of the nursery school was listed to twelve normal children between the ages of eighteen months and five years. An instructor was appointed to be in charge of the nursery school and to direct student assistance. In the autumn quarter of 1927 preparental education was extended through the appointment of a full-time member of the home economics staff in this field.

Two courses are now offered. The first, a five-hour credit course per quarter, continues to be required of all senior students in home economics, with prerequisites of psychology and nutrition. The second, a three-hour credit course, is open to junior and senior students in all departments without prerequisites. Classroom work consists of lectures and discussions, while laboratory experience is furnished through the nursery school where each student observes and assists under direction. Further opportunity for observation and assistance is offered through the day nurseries of the city. The content of the courses as at present given emphasizes the physical care and habit training of children.

The major course has had an average enrollment of twenty-five students per quarter, the minor course a similar attendance in the quarters in which given. Eight advanced students are at present working upon special problems and one student upon a master's thesis in the field of child development. Excellent library facilities are furnished through the main library of the University.

Simultaneously with the extension of courses in the autumn of 1927, the facilities of the nursery school were enlarged to accommodate twenty children. With the added personnel in the department, more definite contact with the homes of the children is now possible. Before admitting any child, a visit is made to the home in order to establish contact with the parents and to observe the child in the home environment. Individual conferences with parents are held whenever deemed advisable by parents or staff. A parental study group consisting of mothers of the nursery-school children, mothers of those on the waiting list, and others interested has also been held fortnightly throughout the year.

The running expenses of the nursery school, including renewal of equipment and cost of food, approximates $1,000 annually. This is met

by the laboratory fees of students and by contributions from parents of the children enrolled in the school.

Instructional salaries to the amount of $4,600 are furnished by the University budget for this purpose. This does not include payment for the voluntary services listed in the next paragraph.

From the beginning, the nursery-school project has received most valuable coöperation from other departments and from other staff members of the Home Economics Department. A physician from the Department of Pediatrics, College of Medicine, gives all children registered in the school a thorough physical examination at the beginning of each quarter and reexamines children after absence due to illness. He acts in an advisory capacity in all matters related to health. A member of the Psychology Department gives the children mental tests twice yearly. A nutritionist of the Home Economics Department weighs and measures the children monthly. She also supervises the planning of menus for the mid-day dinner served the children. The head of the Home Economics Department, who organized the project, gives general supervision, and promotes the project in matters of administration.

The aim of the child development education has been the same throughout,—to train students in dealing with the problems of child care and child training, through classroom consideration of the essential facts and principles related to these problems, and through practical experience in observing children and in dealing with them under trained direction in the nursery school.

f. University of Texas.[53] Preparental education is dealt with at the University of Texas by means of a lecture course in child care and training given in the Home Economics Department and a course on the preschool child in the Department of Philosophy of Education. A nursery school is used for laboratory work in connection with both of these courses; the students in home economics actually participate in the work of the school, while the students in education use it mostly for observation.

The salaries of the instructors giving the lecture work are paid by the University, as these instructors are regular members of the university faculty. The expenses of the nursery school are partly met by a grant from the Texas Public Health Association, but the plant and its equipment and maintenance are furnished by the University. The approximate cost of the nursery school, aside from plant and equipment, is $5,600 per year. Food costs are paid by the parents of the children. This has been fixed at two dollars per week per child. Six hundred dollars is allowed for maintenance; the remainder is expended for salaries for those in actual charge of the school—a nursery-school teacher, an assistant, a trained nurse, fellowship for a graduate, and cook. A great deal of supervisory work is done by members of the regular University staff.

[53] This report was written for the Yearbook by Miss J. C. Winters.

The aim of the work is to supply information concerning the physical, mental, and emotional development of the child; to afford opportunity for contact with children; and to train students in child care. The course in child care and training is required of all majoring in home economics.

The University Health Service and the Department of Philosophy of Education have coöperated extensively in the work of the school—the Health Service by allowing one of the university physicians to make all the physical examinations and to give part of the lecture work in the child care and training course, and the Education Department by taking over all of the psychological work connected with the school. This last includes the giving of intelligence tests, supervision of observation and reports of students, and that part of the lecture work in the child care and training course that is concerned with mental and emotional development. The nursery-school teacher was trained at Merrill-Palmer and has a salary of $2,200 for the school year. She has an assistant who, because of her interest in the work, gives her services for the small sum of $50 per month. There is a trained nurse at a salary of $100 per month. Special problems in connection with the school are undertaken by graduate students, both in the Home Economics Department and in the Department of Philosophy of Education.

The child care and training course requires two hours of lecture and four hours of laboratory work per week for one semester. It is given a credit of three semester hours and is offered during both semesters and in the summer school. The general supervision is undertaken by the head of the home economics department and the nursery-school staff. The feeding of the children is supervised by the heads of the foods and nutrition divisions of the home economics department.

Records on file and available to the students are:

(1) Physical—weight and height charts, sleep records, and physical examination blanks.

(2) Nutritional—menus and recipes with calculations of calorie and mineral value of one serving of each recipe, studies of the food intake both at home and at the school, time studies, and studies of food likes and dislikes.

(3) Psychological—intelligence test blanks and personality studies.

Once each year a report of the physical, mental, and emotional progress of the child is sent to the parent. These reports are discussed with the parents at an open meeting. Special problems suggested by the reports may be taken up at the conference hours. Monthly parent-meetings are held at which some topic related to child care is discussed. Weekly conference hours have been arranged with the physician, the psychologist, or the nutritionist. Students do a certain amount of home observation.

The school is housed in a two-story building that was formerly used as a home. On the first floor there is a large playroom, hall, office, dining

room, kitchen, toilet, and screened play porch. A small nursery, accommodating three babies, a large sleeping room, two bathrooms, a toilet, two unused rooms and a large screened sleeping porch constitute the second floor. The rearrangement of the house for nursery-school purposes, necessary repairs, and equipment cost approximately $2,500. This expense was met by the University.

Students in home economics participating in the nursery-school work are seniors, and have the usual home economics background. They number approximately thirty each year. Other classes, both in the home economics and other departments, do a certain amount of observation work. The education students doing required observation work number about twenty per year.

The catalog description of the two courses for which the nursery school is used as a laboratory is as follows:

"Child Care and Training." This course covers the physical, mental, and emotional development of the child, and the formation of right physical and social habits. Special stress is given to factors influencing health and nutrition. Responsibility of the home for development of the child is also emphasized. Practical work in the child nursery of the department will be included as a part of the course.

"The Preschool Child." This course includes a study of the behavior of the preschool child in terms of its causes, development and disturbances, together with a critical examination of prophylactic and remedial techniques, as well as of tools available for evaluating development. Opportunity for observation of and experimentation with preschool children will be offered by the University Nursery School.

The library facilities for the work are adequate, as we have the use of the University of Texas library, and a special sum of money is granted each year for the purchase of books and magazines.

As far as we have been able to find, we are the first to introduce babies into the nursery school. This was done because it seemed to present the best way of giving students the opportunity to work with the very young child. The babies are brought to the school and called for at the same time as the other children. Students prepare the milk formulae, bathe and feed the babies, and observe their physical and mental development.

g. Vassar College.[54] In the fall of 1927, the nursery school was opened at Vassar College to serve as a laboratory for preparental education.

"It cannot be too definitely emphasized that, valuable as the Nursery School is for observation as a means for the education of young children, its existence on the Vassar campus is justified only so far as the school serves as a laboratory in which the students of the college may develop serviceable and wholesome attitudes toward children, helps the students

[54] This report was written for the Yearbook by Dr. Lovisa Wagoner, Vassar College.

to appreciate more fully the significance of childhood, or helps them lay the basis of skill which will stand them in good stead when they, themselves, become parents or in any capacity deal with young children, or helps them in the performance of their wider social obligations toward their community and the state." [56]

The building in which the nursery school is housed was a gift to the college. The salary budget and the cost of maintenance is borne by the college. A tuition fee of $100.00 a year is charged each child to cover the cost of food, laundry, and other supplies.

The nursery school is housed in a small stone building, located at the edge of the campus. The cost is $90,000 and the cost of the equipment is approximately $4,500.

As an outgrowth of the work in euthenics, it seemed important to add to the college curricula courses in child study which would have as a laboratory a constant group of young children. The aim of such courses is not vocational, but rather to present to such students as may elect the courses a picture of child life, to give them some information regarding children, and to foster an appreciation of childhood.

The courses in child study are at the present time an integral part of the Division of Euthenics. The staff consists of a professor of child study, associate professor of child study, and principal of the nursery school, social worker, two nursery-school teachers, one teaching scholar, and the secretary. A professor of physiology and nutrition acts as consultant in nutrition. A doctor of the college medical department, as physician of the nursery school, inspects each child daily and also, during the year, gives to each child a thorough physical examination. The actual work of preparental education is carried on by the immediate nursery-school staff through lectures, conferences, and informal discussions.

A course entitled "Child Study" is offered which meets three hours a week throughout the year. The students in this course spend two hours a week, throughout the year, in nursery-school assistance, and during the second semester an additional three hours a week of observation which serve as a basis for a topic. During the period of assistance each student is 'attached' to one of the nursery-school teachers who is responsible for guiding the student. The direction of the special problems or topics is distributed among members of the nursery-school staff.

Records of family histories and development are not put into the hands of the students, but such information as seems wise is given to them by the social worker. Until a more complete set of mental test records representing a sequence of tests shall be ready, the mental records will not be available for the students, but a report of the children's intelligence level is given in general or descriptive terms.

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[56] Vassar College. *The Mildred R. Wimpfheimer Nursery School.* New York: Poughkeepsie, 1928. P. 16.

The direct contact with the home is made by a social worker. She visits each home before a child is admitted. After the admission of the child, she obtains the family history and makes subsequent visits as they seem advisable. Additional contacts with the parents occur when the parents bring and call for the children. At such times the principal of the school is available for conferences and informal discussions. The member of the staff who is responsible for planning the menus also confers with the parents about the nutritional condition and the planning of home meals for the children. The nutritionist assists in further conferences regarding nutrition.

Courses in child study are open to students of junior and senior standing. Up to date the number has not been limited. There are thirty-two students in Child Study, ten in the Development of Learning, and, in addition, eighty in Child Psychology and fifteen in Nutrition who have used the nursery school as a laboratory. The students take these courses for various reasons: some are looking toward social or educational work as a vocation; others expect to be married soon, and still others have a vocational interest.

The courses offered in child study are:

"Child Study": A working knowledge of the nature of the child, the technique for studying the child, and methods for training the child.

"Development of the Learning Process in Children": A study of the child's acquisition of control over his own body and his environment and of the means which facilitate or hinder such control.

"Problems in Child Study": Discussion of the latest findings and modern trends in child study. Special problems in the nursery school selected for intensive study.

It is assumed that, while the most direct training for parenthood is offered by the courses in child study, such courses as those in child psychology and in nutrition might also well be considered as under this heading. It is the assumption that both theoretical and practical knowledge are of value to the student and that there is no means so potent for arousing an interest in children and for stimulating intelligent attitudes toward children as actual contact with the young.

The library at Vassar College is well equipped and has added this year such standard works and such newer publications as seemed significant in this particular situation.

V. Summary

This section deals with the history and status of education in parenthood for students who are not yet faced with the immediate problem of children of their own, but who, rather, are being given training in parenthood as part of their general education.

Probably the most striking feature of this movement for the education of preparents is the rapidity of its development. Less

than ten years ago there were no schools, no courses, no teachers; the first endowment, the Merrill-Palmer fund, had been created but was not yet functioning. To-day there are classes in child care and training in hundreds of schools ranging from the sixth grade through work of graduate rank in colleges and universities in almost every state in the Union and in several territories.

There is now fairly general agreement among educators that definite courses in the technique of parenthood are desirable and should be given as part of the general education course before the individual is faced with the actual problems of parenthood. There is also in the majority of the projects now organized a recognition that method in such courses should include laboratory practice with children, and that subject matter should consider alike the physical, mental, and emotional aspects of child life.

Owing, however, to the fact that each project in the rapid development of the movement has been forced to adapt the limited available material to its own need, a wide variety of method and subject matter has resulted. Some of this diversity is proving a stimulus to the discovery of better methods and materials; much of it, on the contrary, means wasted energy and indicates that one of the most urgent present needs is for the development of sound content, usable textbooks, and adequately-trained teachers.

Extensive research in child life will be necessary to the development of content, and thoughtful practice in teaching to the development of textbooks. Good teachers, the most important essential to preparental education, can be provided only by a constant encouragement to further training of gifted teachers who have in addition to their gift for teaching a point of view flexible enough to adapt training in physical welfare to an understanding of mental and emotional health, or to adapt training in psychology to an understanding of physical health, thus giving a well-rounded preparation for this most demanding teaching task.

CHAPTER XII

PROFESSIONAL TRAINING FOR RESEARCH AND INSTRUCTION IN PRESCHOOL EDUCATION

I. Growth in Professional Training

Professional training in child development with a center of interest in the preschool child is a new movement in education. It has gained impetus through the establishment, as integral parts of institutions for higher learning, of stations and institutes for the study of normal children, and the subsequent introduction of preschool laboratories, nursery schools, and guidance clinics. Less than a dozen years ago the first center for the scientific study of normal and superior children at a university was established; since then institutes of child welfare research have been founded at a number of leading universities. Provisions have rapidly been made for the study of young children at these centers; nursery schools have been added to the departments of home economics or psychology in an increasingly greater number of colleges and universities, and opportunities have been increased for first-hand study of young children in guidance clinics, hospitals, orphanages, and other existing agencies.

In the directory of research in child development, published by the National Research Council in March, 1927, nearly one hundred persons, representing almost as many institutions, were listed as reporting research in progress in the preschool field. The material presented in this section is based in part on answers to questions directed to these persons in regard to facilities and opportunities in their institutions for professional training in the preschool field.

II. Training Centers

Through the Child Development Committee of the National Research Council, national scholarships[1] are granted to specially quali-

[1] During 1926-27 and 1927-28 these were designated as fellowships; at the beginning of the academic year 1928-29, the term was changed to scholarships and the term fellowships reserved for persons with the Ph.D. degree who were continuing their studies. In order to avoid confusion in this section, the revised terminology is used throughout.

fied workers for advanced study in any of seven institutions: Columbia University, New York, N. Y.; State University of Iowa, Iowa City, Iowa; Merrill-Palmer School, Detroit, Mich.; University of Minnesota, Minneapolis, Minn.; Yale University, New Haven, Conn.; Johns Hopkins University, Baltimore, Md., and the University of Cincinnati, Cincinnati, Ohio. These institutions constitute the major places where coördinated training in various aspects of child development is offered. In addition to the national scholars, there are, however, at each institution a number of graduate assistants, graduate students, research assistants, and research associates who are receiving similar training.

Many other institutions where research is going on in some particular aspect of growth in the preschool period have not attempted to unite or organize the available courses or to supplement them so as to form a well-rounded program of child development. At a number of places preschool laboratories or nursery schools are maintained or preschool children are otherwise available for study, and advanced students are doing research under direction. Preschool children were reported as being readily available, and from two to twenty advanced students as doing research each year at the University of California at Los Angeles, Cal.; University of Chicago (Department of Home Economics), Chicago, Ill.; Kansas State Agricultural College, Manhattan, Kans.; Los Angeles public schools, Los Angeles, Cal.; Northwestern University, Evanston, Ill.; Smith College, Northampton, Mass., and University of Toronto, Toronto, Canada. This is undoubtedly only a partial list; many other institutions reported isolated researches in progress. At a few places undergraduates are being trained in minor research projects. At the newly established institute of child welfare at the University of California at Berkeley, eight research assistants were majoring (in 1927-28) in education, psychology, household science, zoölogy, and social economics.

III. Types of Training

The appointments to national scholarships prepare for research and practice in fields connected with the mental and physical health and growth of children, and lead to the following types of service: (1) research in child development, all fields; (2) resident instruction in child development and welfare in school, college, and uni-

versity; (3) child welfare service in clinics, institutions, social service, health organizations, schools, nursery-school teaching, etc.; and (4) parent education, in field organization, study-group leadership, extension programs, and resident instruction in college or university.

In 1927-28 twenty-five percent of the persons applying for these scholarships planned to prepare for research, twenty-eight percent for instruction, twenty-six percent for welfare service, and twenty-one percent for parent education. In 1928-29 the proportion of those planning to prepare for research increased to thirty-six percent; for instruction it remained at twenty-eight percent; for welfare service it was twenty-four percent, while for parent education it dropped to twelve percent.

During the two years 1926-27 and 1927-28, twelve to fifty advanced students specialized in child development in each of the seven institutions. These do not include students specializing in parent education or those preparing to be nursery-school teachers (these groups are treated elsewhere in the Yearbook). The order of emphasis on the four types of service varies with the different institutions, but there is a tendency toward training more persons in research than in the other fields.

The training has been most frequently orientated around psychology as the major field, with home economics and education next, and occasionally around such other fields as physical growth, biology, speech, and sociology.

IV. Academic Background of Students

Of the foregoing students specializing in child development during these two years, approximately 71 percent held the degree of B.A., B.S., or Ph.B.; 25 percent the degree of M.A. or M.S.; three percent the degree of Ph.D.; and fewer than one percent the degree of M.D. Of the applicants for the national scholarships in 1927-28, 57 percent held the degree of B.A. or its equivalent, 35 percent the M.A. or M.S. degree, six percent the Ph.D., and two percent the M.D. degree; in 1928-29, 50 percent held the B.A. degree or its equivalent, 49 percent the M.A. or M.S. degree, and one percent the M.D. degree. Those with the Ph.D. degree were not included in 1928-29, but were applicants for fellowships. Many

applicants holding the B.A. degree were candidates for the M.A. degree.

An analysis of the academic background of the applicants for scholarships during the two years showed that 49 and 49 percent, respectively, had specialized in psychology or education, 29 and 23 percent in home economics (including nutrition), eight and six percent in sociology, while four percent had a general academic background in 1926-27, and one or two percent each had specialized in nursing, medicine, physical education, library, speech, music, genetics, child welfare, biology, romance languages, and mathematics. In 1928-29 five percent each had specialized in English and chemistry. Many of the workers were experienced teachers, clinical psychologists, nurses, social workers, physical education directors, dietitians, or instructors seeking specialized training.

V. Courses

Scholars were registered in the following courses in child development and related fields in the several institutions. These probably represent at least a majority of the courses available in child development.

1. Research

Research in child development, research in child welfare, research with young children, methods of research, special problems in personality record, in physical growth, in experimental methods, in home technique and in parental education, curricular research, and research seminar.

2. Psychology of Childhood

Psychology of childhood, mental growth and development, development of the child, seminar in contemporary research in mental development of children, seminar in current literature on child psychology, observational and experimental method with children, ontogenetic psychology, psychology of infancy, infancy and early childhood, experimental observation of young children, activities of young childhood, mental development of the preschool child, testing of preschool children, clinical child psychology, clinical work with children, clinical study of children, psychology of exceptional children, psychology of adolescence.

3. General Psychology

Survey of contemporary psychology, lectures and practice work in psychology, individual research in psychology, psychology, experimental psychology, advanced experimental psychology, laboratory in psychology, clinical psychology, nature and varieties of human behavior, psycho-

educational clinic, mental adjustments, measurement of personality traits, psychology of personality, psychopathology, abnormal psychology, psychology of learning, social psychology, physiological psychology, mental measurements, mental and educational measurements, advanced mental measurements, individual mental testing.

4. Statistics

Statistics, psychological statistics, advanced statistics, mathematical theory of statistics.

5. Mental Hygiene

Mental hygiene, behavior problems, child training, home problems.

6. Education

Curricula for young children, curricular research, practice teaching in nursery school, nursery school, supervision and training of the teachers of young children, nursery-school technique, problems in preschool education, problems in nursery-school technique, nursery-school methods, educational methods of young children, nursery-school technique with problem in children's records, educational psychology, advanced educational psychology, educational psychology seminar, educational measurements, mental and educational tests, measurement in kindergarten and first grade, introduction to education, the curriculum, professional education of teachers, problems of the training school, reconstruction of the elementary curriculum, educational economics, rural education and rural sociology, advanced course in rural education, modern and experimental schools in Europe, philosophy of education, character education.

7. Parental Education

Parental education, parental education in child care and training, technique and practice of parental education, child study and parental education, nursery school and parental education movements, social and religious background, special problems in home technique.

8. Sociology

Social case work, social progress, social organization, history of social theory, history of the family, seminar in social statistics, seminar in educational sociology.

9. Nutrition and Biochemistry

Nutrition of children, nutrition of young children, child feeding, nutrition, nutrition and dietetics, nutrition seminar laboratory, nutrition of the family, nutrition in disease, seminar in nutrition, foods and cookery with laboratory, biochemical seminar with laboratory.

10. Physiology, Physical Growth and Care

Higher activities of the nervous system, physiology and conditioned reflexes, histology, embryology, anatomy of foetus and child, physical

growth and development, physical growth laboratory, physical development of childhood, child care, health care of children, maternal and child hygiene.

11. Other Courses

Advertising, magazine writing, contemporary American literature, the Bible in modern teaching, modern use of the Bible, voice and diction, public opinion, art appreciation, special problems in home economics.

VI. Fields of Research

The fields of research in which advanced students (including scholars), were engaged in 1926-27 and 1927-28 included in the order of number of students: psychology, education, mental hygiene, nutrition, anthropometry, sociology, home economics, child hygiene, pediatrics, psychiatry, neuro-psychiatry, chemistry, biochemistry, physiology, biology, and speech. In most of the training centers students were engaged in research in five or six of these different fields; additional fields of research of which the students did not avail themselves were open in each of the institutions. In addition to those mentioned the following fields of research are open: bacteriology, pharmacology, orthopedics, anatomy, anthropology, and dentistry.

Approximately six to twenty-five students each year were engaged in research with preschool children at each of the institutions to which scholars were assigned.

VII. Laboratory Facilities and Equipment

In order to provide opportunity for first-hand study of young children, each of the institutions conducts a preschool laboratory, nursery school, or guidance clinic. The following summary shows the number of children available in these groups and the hours at which they are available:

Institution	No. of Groups	No. of Children Enrolled	Age Range	Hours Attendance	Days Attendance Weekly
1	3	75	18 mos.-5 yrs.	8:30- 3:30	5
2	4	92	18 mos.-5 yrs.	9:00-12:00	5
				or 9:00- 4:00	
3	1	66	15 mos.-6 yrs.	9:00-12:00	5
4	2	42	18 mos.-4 yrs.	8:30- 3:00	5
5	1	31	19 mos.-5 yrs.	9:00-12:30	5
				or 9:00- 3:30	
6	1	32	2 yrs.-5 yrs.	8:45-12:45	5
7	1	36	2 yrs.-4 yrs.	9:00-4:00	5

In addition to these groups, preschool clinics are maintained where varying numbers of children are met each week. Sometimes these clinics are held exclusively for consideration of problems of children who are actually enrolled in the preschool groups, but usually the children seen are other than those regularly enrolled in such groups. In some organizations as many as twenty-eight children are seen each week. Usually the children are seen for periods of one to three hours at a time and as often as the case demands. Opportunities for home visitation or living in the homes of preschool children for a limited period of time are also usually provided, and in most of the institutions there is opportunity for work with children through such other agencies as children's hospitals, boards of health, clinics in medical schools, psychopathic hospitals, day nurseries, mental hygiene clinics, kindergartens, and social agencies.

The amount of contact that the student has with preschool children varies according to the individual needs of the student, but often totals as much as twenty hours weekly.

Laboratory equipment is provided in accordance with the needs of the problems under investigation. Generally, standard psychological apparatus and test materials are furnished. In some of the laboratories there are complete sets of instruments for physical growth measurements. Provisions for nutritional research and related chemical researches, for bacteriological research, and for animal laboratories are made at some of the institutions.

Special laboratory space for experimental work is set aside at each institution. This usually consists of a series of separate small rooms for individual work with children. At Yale University there is a photographic observatory dome and a special observation alcove.

VIII. Problems in Professional Training

With the marked impetus that child study has had in the past few years have come certain problems. A heavy burden has been placed on educational institutions; on the one hand, by the newly-awakened public demand for the help of trained workers and for schools to take their part in the early life of the child; and on the other hand, by the increasing recognition of opportunities for training. Whether a satisfactory balance can be achieved between the demand and supply remains to be worked out. The danger of an

oversupply of inadequately trained persons is evident. The Child Development Committee has made a forward step by limiting the number of scholarships granted during the present year, requiring more advanced preparatory training and introducing fellowships for post-doctorate study. Probably the trend will be towards more intensive and more prolonged training.

A signal advance in the past ten years has been the increasing emphasis on broader training and the coördination of training in many fields. This has been evidenced by the centers that have been established for child study, by the formation of the Child Development Committee of the National Research Council, and by the national research conferences in child development attended by specialists in many fields. Although many fields of study have been included in the programs at the various centers, certain fields have been emphasized more than others, probably because psychologists and educators were the first to grasp the vision of all-round development. The excellent isolated researches that are going on in some fields, as in pediatrics and physical development, for example, are little reflected in the coördinated programs of the centers at present. The next advance will probably be found in the coördination of yet other fields of endeavor.

CHAPTER XIII

THE PROFESSIONAL TRAINING OF NURSERY-SCHOOL TEACHERS

I. Method of Collecting Data

The training of nursery-school teachers is still in the experimental stage. It seemed desirable to discover, if possible, the variations in practice. For this purpose a preliminary questionnaire was prepared, and sent to fifty-five schools supposedly interested in the professional training of nursery-school teachers.

Of these fifty-five schools, seventeen[1] failed to reply to the questionnaire. Of the thirty-eight schools that did reply, twenty-five[2] answered "No" to the question, "Does your institution prepare students for nursery school teaching?" Three of these schools, University of Nebraska, Perry Kindergarten Normal School, Boston, Mass., and Milwaukee State Teachers College, however, reported that definite steps were being taken toward organizing a course. Sixteen other schools offer courses giving general information concerning nursery schools, though not designed to prepare students for teaching.

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[1] Antioch College; Children's Foundation, N. Y.; Froebel Kindergarten Training School, Harrisburg, Pa.; Froebel League Kindergarten Training School, N. Y.; Flatbush Training School, Brooklyn; Geneseo State Normal, Geneseo, N. Y.; George Peabody College, Nashville, Tenn.; Miss Fulmer's School, Los Angeles, Cal.; Normal Training School, Savannah, Ga.; Newark State Normal, Newark, N. J.; New Platz State Normal, New Platz, N. Y.; Pestalozzi-Froebel Training School, Chicago, Ill.; San Jose State Teachers College, San Jose, Cal.; Trenton State Normal, Trenton, N. J.; University of California, Berkeley, Cal.; Wheelock School, Boston, Mass.; Western State Teachers College, Kalamazoo, Mich.

[2] Adelphi College, Brooklyn, N. Y.; Bureau of Educational Experiments, N. Y.; Chicago Normal College; Chicago Teachers College; Central State Teachers College, Mt. Pleasant, Mich.; Ethical Culture School, N. Y.; Fresno State Teachers College, Fresno, Cal.; Greeley State Teachers College, Greeley, Colo.; Golden Gate Kindergarten Association, San Francisco; Kindergarten Primary Training School, Boston, Mass.; Kent State Normal College, Kent, Ohio; Leslie School, Cambridge, Mass.; State Teachers College, Milwaukee, Wis.; Miss Wood's Kindergarten Primary Training School, Minneapolis; Potsdam State Normal School, Potsdam, N. Y.; Peru State Normal School and Teachers College, Peru, Nebraska; Perry Kindergarten Training School, Boston, Mass.; Smith College, State Teachers College, Cedar Falls, Iowa; Teachers College of Indianapolis; Tulane University; University of Nebraska; Vassar College, Winnetka Public Schools, Winnetka, Ill.; Yale Psycho-Clinic.

Thirteen[3] of the thirty-eight schools replying to the questionnaire do prepare students for nursery-school teaching. These schools have supplied information concerning entrance and graduation requirements, content of courses, and practical experience provided.

This information revealed many points of difference in procedure. These points of difference were then carefully considered and included in a second questionnaire, more specific and detailed than the first one.

The second questionnaire was then sent to the thirteen schools. Data from eleven of the thirteen form the basis for this chapter on current practices in the professional training of nursery-school teachers.[4]

II. Comparative Study of Data

In examining the tabulated data, many variations in practice are explained by specific conditions in the institution or department in which the program of studies is offered. For example, the report from Mills College is based upon plans which have been completed within the past year. Similarly Western Reserve University has only recently incorporated the Cleveland Kindergarten Primary Training School which formerly offered such preparation. Again, at the University of California, Southern Branch, the program of training is in a preliminary stage and is gradually being

[3] Merrill-Palmer School; Mills College; National Kindergarten and Elementary College; Nursery Training School of Boston; Iowa State College of Agriculture and Mechanic Arts; Teachers College, Columbia University; Temple University; University of California, Southern Branch; University of Chicago; University of Cincinnati; Iowa Child Welfare Research Station; Wellesley College; Western Reserve University.

[4] Temple University discontinued the course preparing students for nursery-school teaching in 1927-28, probably to be resumed later.

Wellesley College reported that while students are prepared for nursery-school teaching, the program for this preparation is such that it could not be adequately represented by use of the questionnaire. The preparation is described as follows: "A year of graduate study adapted to the needs of the student, but including, of course, theory and problems of the nursery school together with abundant observation and practice, is required of prospective directors of nursery schools. We have no standardized or fixed program for such students. The work is arranged to suit their individual needs as determined by their previous education. The student undertakes what she needs and can do in a year. In one way or another the College provides for any need she may have. Two nursery schools, one on the campus, provide for observation and practice."

expanded in response to an insistent demand, which, the report states, "may force the issue soon of preparing more teachers more adequately for more private nursery schools."

In several cases, while preparation for nursery-school teaching is provided, it does not receive the major emphasis. Thus, the Iowa Child Welfare Research Station trains teachers incidentally.

The data from the eleven schools have been assembled to exhibit tendencies with respect to entrance and graduation requirements, including a discussion of course content and practical experience required.

III. Entrance Requirements

There seems to be a general effort to select carefully students for nursery-school teaching. Of the requirements listed for prospective teachers, *interest in young children* is mentioned, as might be expected, by practically all the respondents. Other requirements are as follows:

a. Health. Good health seems to be considered highly important for the nursery-school teacher, since seven[5] of the eleven schools make a health examination or a report of freedom from physical handicap a requirement for entrance. At Merrill-Palmer a health examination is "desirable, but not required."

b. Academic Status. The general high standard set for students preparing for nursery-school teaching is indicated by the fact that in only one instance, that of the National Kindergarten and Elementary College, are students admitted directly from high school. At Iowa State College, the Bachelor's degree is required; at Iowa Child Welfare Research Station and Merrill-Palmer School only graduate students are eligible for nursery-school training. At the University of Cincinnati, while students may enter the training before completing their requirement for a B.S. degree, these requirements must be satisfied before the student takes the final year of teaching.

In the six remaining schools,[6] two years' undergraduate study

[5] Iowa State College; National Kindergarten and Elementary College, Evanston, Ill.; University of Chicago; Mills College; University of California, Southern Branch; University of Cincinnati; Western Reserve University.

[6] University of Chicago; Mills College; Teachers College, Columbia University; Nursery Training School of Boston; University of California, Southern Branch; Western Reserve University.

or two years' normal training, or the equivalent, is required for entrance, with the added requirement at Teachers College, Columbia University, of two years' successful teaching experience unless the candidate presents a bachelor's degree.

c. Scholarship. A tendency toward requiring a high standard of scholarship in addition to previous preparation is indicated by the requirements of several institutions that students show superior ranking in study pursued before entrance; *e.g.,* Iowa State College requires grades of 85 or above; National Kindergarten and Elementary College admits only applicants from the upper three-quarters of the high-school group; University of Chicago requires that applicants show grades 25 percent higher than the passing mark; Mills College specifies that the average must be 'C' or above; Teachers College, Columbia University, selects only those of superior scholarship or demonstrated ability in some field. The general recognition of the need for native ability as well, is evident from the fact that all but three[7] of the institutions require satisfactory passing of an intelligence test for entrance.

d. Other Requirements. Several schools make other specific requirements. Merrill-Palmer and Teachers College, Columbia University, specify that the student must have some knowledge of general psychology before entrance; Western Reserve University accepts special diplomas only if psychology has been included in the student's course. A course in cookery before entrance is required by Mills College, and a knowledge of general principles of nutrition is recommended, but not required, by Merrill-Palmer. Character recommendations are asked for at National Kindergarten and Elementary College and at the University of Chicago. A personal interview is required at Nursery Training School of Boston and at Teachers College, Columbia University, before the student is permitted to enter upon preparation for nursery-school teaching, and in the former the passing of a special music test which is in process of standardization is also required.

e. Summary. In general, there is, then, agreement that those preparing for nursery-school teaching should be students with a definite interest in young children, excellent health, fine character,

[7] University of Chicago; Nursery Training School of Boston; Iowa Child Welfare Research Station.

good native ability, superior scholarship, and adequate fundamental preparation. It augurs well for the future of the nursery school that so high a standard has been set for the selection of those students who will participate in the shaping of its future policies.

IV. Graduation Requirements

The programs of study required for graduation in the eleven schools show both wide variations and interesting similarities.

1. Academic and General

Only five[8] of the schools mention their academic requirements in detail. In each of these cases the requirements include English and science; the latter apparently receives its greatest emphasis at Mills College, where three courses are required, varying from three hours a week for eighteen weeks to seven hours a week for thirty-six weeks. Other requirements mentioned include courses in history,[9] history of education,[10] philosophy,[11] sociology,[12] and social science.[13] It is probably fair to assume that similar requirements prevail in the other six institutions.

a. Child Psychology. Each of the eleven schools requires at least one course in child psychology; in five cases[14] more than one such course is required. In each instance the course includes not less than two hours a week for eighteen weeks.

b. Child Hygiene and Nutrition. There seems to be also a very general feeling that a knowledge of child hygiene and of the principles of nutrition is an essential part of the equipment of the

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[8] National Kindergarten and Elementary College; Teachers College, Columbia University; Mills College; University of Chicago; University of California, Southern Branch.

[9] National Kindergarten and Elementary College; Teachers College, Columbia University.

[10] National Kindergarten and Elementary College; Teachers College, Columbia University; Mills College.

[11] Mills College; Teachers College, Columbia University; Nursery Training School of Boston.

[12] National Kindergarten and Elementary College; Merrill-Palmer; Nursery Training School of Boston; Western Reserve University.

[13] University of California, Southern Branch.

[14] National Kindergarten and Elementary College; Mills College; Teachers College, Columbia University; University of Cincinnati; University of California, Southern Branch.

nursery-school teacher, for each school requires such courses for graduation.

c. Physical Growth. Closely related to the study of child hygiene and nutrition for young children is the study of the physical growth of children and the measurement of that growth. This knowledge also seems to be considered an important phase of the nursery-school teacher's preparation, for six[15] of the eleven institutions included in this report mention specific courses dealing primarily with the various aspects of physical growth. In the remaining five schools this study forms a part of other courses.

The extent to which a study of the posture of young children is included in these courses in physical growth or in other courses is uncertain. Only three institutions specifically mention such study. Merrill-Palmer reports that the course in physical growth includes "some work in posture and special studies on posture are sometimes assigned to individual students." Iowa State College includes a study of posture in a course entitled "Special Problems," and Mills College includes such study in the course "Theory of Individual Gymnastics."

d. Mental Hygiene. Specific mention is made by few of the schools of any requirement in the field of mental hygiene. At Merrill-Palmer School it is given particular emphasis in the course "Mental Growth and Development of Character." Merrill-Palmer School also requires a course in "Behavior Problems." At Iowa State College, it is given consideration in the psychological seminar. At Teachers College, Columbia University, it is given consideration in practically every course, though no specific course as such is required for graduation. This may be the case in each of the eleven schools reporting.

e. Educational Measurements. Six[16] of the eleven schools mention requirements in educational measurements. The teachers in the nursery school are thus being equipped to coöperate intelligently with research workers in this field.

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[15] Iowa State College; National Kindergarten and Elementary College; University of Chicago; Merrill-Palmer School; Mills College; University of California, Southern Branch.

[16] Iowa State College; National Kindergarten and Elementary College; Merrill-Palmer School; Mills College; Teachers College, Columbia University; University of California, Southern Branch.

f. Clinical Study. A beginning is being made in the training of nursery-school teachers in the clinical approach to the study of children. The University of Cincinnati and Western Reserve University both require such training.

g. Parental Education. The recognition of parental education as an integral part of the nursery-school program is evidenced by the requirement of six[17] schools that students pursue at least one course in parental education.

h. Curricula for Young Children. There seems to be an agreement also that there should be a thorough grasp of the curricular content which meets the needs of children on the nursery-school level. Provision for acquiring this grasp is made in different ways in the various institutions. In six[18] of the schools separate courses are offered covering such items as: Play Life of Young Children, Play Materials and Equipment, Music for Young Children, Fine and Industrial Arts, Children's Literature, and in two cases[19] Science for Young Children. Each of these courses is required of students preparing for nursery-school teaching unless previous experience or training has made such a study unnecessary Each course occupies approximately two periods a week for eighteen weeks.

In three[20] schools these courses are required in addition to a special course considering primarily the technique of nursery-school teaching, in which course, also, some attention is given to curricular problems.

In five[21] of the institutions much of this content, instead of being covered in separately listed courses, is included in a more general and longer course which includes a consideration of the specific technique of nursery-school teaching.

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[17] Mills College; Western Reserve University; Merrill-Palmer School; Nursery Training School of Boston; University of Cincinnati; Iowa State College.

[18] National Kindergarten and Elementary College; Chicago University; Teachers College, Columbia University; Western Reserve University; Nursery Training School of Boston; University of California, Southern Branch.

[19] National Kindergarten and Elementary College; University of Chicago.

[20] National Kindergarten and Elementary College; Teachers College, Columbia University; Nursery Training School of Boston.

[21] Iowa State College; Merrill-Palmer School; Mills College; University of Cincinnati; University of Iowa.

2. Special Course in Technique of Nursery-School Teaching

a. Where Required. A special course considering the specific technique of nursery-school teaching (and in some cases curricular problems as well) is required in eight[22] of the eleven schools.

b. Time Allotment. The length of time devoted to this course varies widely, depending in all probability upon the scope of the content. In the three[23] schools where this course is required in addition to separate intensive courses covering various phases of curricular content, the course meets two hours weekly for one semester.

In the five[24] schools in which curricular problems are in the main covered in a comprehensive course, the time allowed ranges from two to four hours weekly for two semesters. In one[25] of these institutions the course is supplemented by two courses in kindergarten education which presumably deal with curricular content for young children.

c. Students Admitted. Examination of the data concerning the special course in nursery-school technique shows some interesting variations in the general organization of the course. At the National Kindergarten and Elementary College, the course is required of all students in the sophomore year whether or not they intend to become nursery-school teachers. A continuation of the course is required in the junior and senior years for all those preparing definitely for nursery-school teaching. At the University of Cincinnati the course is offered in the senior year, though the final year of training follows completion of the requirements for the B.S. degree. In all of the other schools the course is offered as a graduate course.

d. By Whom Given. The number of different departments taking part in directing the special course in nursery-school technique indicates the general widespread interest in nursery-school

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[22] Iowa State College; Merrill-Palmer School; Mills College; University of Cincinnati; Iowa Child Welfare Research Station; National Kindergarten and Elementary College; Teachers College, Columbia University; Nursery Training School of Boston.

[23] National Kindergarten and Elementary College; Teachers College, Columbia University; Nursery Training School of Boston.

[24] Iowa State College; Merrill-Palmer School; Mills College; University of Cincinnati; University of Iowa.

[25] The University of Cincinnati.

education. In three[26] of the eight schools offering this special course, it is given under the direction of the school of education; in one[27] under the school of education and the home economics department; in another[28] through the coöperation of the home economics department and the department of psychology; in still another[29] it is offered by the departments of home economics and child care; and in one case[30] by the department of psychology. At Merrill-Palmer School it is given under "special direction of the nursery-school teacher" in coöperation with the departments of psychology, physical growth and development, and parent education.

e. Content. In every case the course content indicates a comprehensive consideration of various problems of the nursery-school field, including analysis of the learning processes of children, analysis of typical teaching acts, evaluation of nursery-school curricula, and the keeping of records in the nursery school. In several cases a study of organizing, budgeting, and equipping a nursery school is also reported. Unless included in other courses, a study of the history of the nursery school seems to be a part of the course content.

3. Practical Experience

a. Provisions. The very practical aspect of the training provided for students preparing for nursery-school teaching is evidenced by the provision made by each of the eleven institutions for actual experience with children. Nor does it seem to be considered sufficient that the student shall understand children on one level only, for in ten of the reports mention is made of actual contact with children on other levels. In five[31] cases this contact is provided in the kindergarten or first grade or both; two[32] institutions

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[26] National Kindergarten and Elementary College; Teachers College, Columbia University; Nursery Training School of Boston.

[27] Iowa Child Welfare Research Station.

[28] Iowa State College.

[29] University of Cincinnati.

[30] Mills College.

[31] National Kindergarten and Elementary College; Teachers College, Columbia University; Iowa Child Welfare Research Station; University of Cincinnati; University of California, Southern Branch.

[32] Merrill-Palmer School; University of Cincinnati.

TABLE I.—CONTENT OF THE SPECIAL COURSE IN TECHNIQUE OF NURSERY-SCHOOL TEACHING

School	Records	Analysis of Learning	Analysis of Learning Processes	Analysis of Typical Teaching Acts	Evaluation of Nursery-School Curriculum	Formulation of Nursery-School Curriculum	Nursery-School Organization	Nursery-School Budget	Selection of Equipment	Nursery-School History	Place of Nursery-School in Society
Iowa State College	×	×	×	×	×	×	×		×		
Iowa Child Welfare Research Station	×	×	×	×	×	×	×		×	×	
Merrill-Palmer School	×	×	×	×	×	×	×		×	×	×
Mills College	×	×	×	×	×	×	×		×		
National Kindergarten and Elementary College	×	×	×	×	×	×	×	×	×	×	×
Nursery Training School of Boston	×	×	×	×	×						
Teachers College, Columbia University	×	×	×	×	×	×	×	×	×	×	×
University of Cincinnati	×	×	×	×	×	×	×	×	×	×	

The University of Chicago gives the content as follows: learning problems; development and percent status of nursery school—kindergarten—primary education; manual arts for nursery school, kindergarten and first grade.

University of California, Southern Branch, and Western Reserve University offer no such course.

provide for this additional experience in a day nursery; two[33] use a children's hospital; the same two also provide experience in a children's clinic. In one case[34] the home economics practice house provides the opportunity for additional contacts.

The greatest variety of experience is reported by the University of Cincinnati where students are reported as having experience in nursery school, kindergarten, orphanage, children's hospital, and clinic.

b. Amount of Time. The length of time devoted to this actual contact with children is reported from nine[35] of the eleven schools listed.

In these nine schools the period of practice is extended over a period of weeks. The shortest interval of time mentioned is at the University of California, Southern Branch, where the practice period covers nine weeks. In two instances, University of Cincinnati and Nursery Training School of Boston, the practice period is distributed over four semesters. In two other instances, University of Chicago and Iowa Child Welfare Research Station, the period covered is thirty-six weeks, or two semesters. At the National Kindergarten and Elementary College the period covered varies from nine to eighteen weeks, owing presumably to the varying experiences of the students. Merrill-Palmer School reports the practice period as "four weeks of assistantship in one nursery school; 8 to 12 laboratory hours per week during the remaining weeks of the year." At Teachers College, Columbia University, the period of nursery-school teaching extends over one semester in addition to the period of kindergarten and first grade teaching, varying from eight to eighteen weeks or more according to the needs of the individual student. This generally prevalent policy of extending the practice period over a number of weeks is probably due to a belief that students can be better prepared to meet the growing needs of children by being given opportunity to watch that growth from week to week over a considerable period of time than over a shorter period.

The amount of time per week devoted to this practice varies and is not, as one might expect, proportionately less in those schools in which it extends over a comparatively longer period. For example, at the University of Chicago, the practice period extends over a thirty-six week period, but ten hours weekly are required, making a total of 360

[33] University of Cincinnati; Nursery Training School of Boston.

[34] Iowa State College.

[35] University of California, Southern Branch; Iowa State College; National Kindergarten and Elementary College; University of Chicago; Merrill-Palmer School; Teachers College, Columbia University; Nursery Training School of Boston; University of Cincinnati; Iowa Child Welfare Research Station.

hours of required practice. The maximal time required for actual contact with children seems to be at the Nursery Training School of Boston, where nine hours weekly are required for four semesters. The shortest amount required seems to be at Iowa State College where the period covers twelve weeks, with four to seven fifty-minute periods per week. Between these two extremes are Teachers College, Columbia University, where six hours per week for eighteen weeks is required in the nursery school and 120 hours in the kindergarten and first grade except for experienced students; the University of Cincinnati, where three hours weekly is required for thirty-six weeks; the Merrill-Palmer School, where students spend four weeks of intensive training as assistants in the nursery school and 8 to 12 laboratory hours per week during each of the remaining weeks of the year; the Iowa Child Welfare Research Station, with three hours weekly for 36 weeks; the National Kindergarten and Elementary College, where students spend five hours weekly for 9 to 18 weeks; and University of California, Southern Branch, with three hours daily for 9 weeks.

The period of practice and the intensity of the practice during that period show such a wide variation that it would be interesting to discover upon what basis the amount of practice required has been determined and the standard by which the adequacy of that practice is judged.

c. Supervision. The same coöperation which was found to exist between departments in the conduct of the special course in nursery-school technique exists also in the supervision of the student teaching in the nursery school and in other practice centers.

In five cases[36] the regular teacher has the help of the head of the nursery-school department or the director of the lower primary department in supervising student teaching. In four cases[37] the psychologist coöperates with the regular teacher or other members of the staff in supervising student teaching; in three cases[38] the home economics supervisor or director of home economics gives such coöperation. In every case except one[39] the regular teacher of the room in which the experience is being given has direct supervision of the student teaching in that room.

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[36] National Kindergarten and Elementary College; Teachers College, Columbia University; Nursery Training School of Boston; University of Cincinnati; Western Reserve University.

[37] Iowa State College; Merrill-Palmer School; Mills College; University of Cincinnati.

[38] Iowa State College; Merrill-Palmer School; Mills College.

[39] Iowa State College.

II.—Where Practical Experience is Provided and Under Whose Supervision

School	*Place*	*Supervision*
Iowa State College	Nursery-school home economics practice house	Psychologist Home economics supervisor Head of nursery-school department
Iowa Child Welfare Research Station	Preschool laboratory	Regular teacher of preschool laboratory
Merrill-Palmer School	Nursery school Day nursery	Regular teacher of nursery school with advice of psychologist and nutritionist
Mills College	Nursery school Preschool laboratory Clinic	Regular teacher of nursery school Psychologist Home economics supervisor
National Kindergarten and Elementary College	Nursery school Kindergarten First grade Second grade	Regular teacher of nursery school Head of nursery school department
Nursery Training School of Boston	Nursery-school family welfare visiting	Regular teacher of nursery school Head of nursery-school department
Teachers College, Columbia University	Nursery school Kindergarten First grade	Regular teacher of room Direction of lower primary education
University of Chicago	Nursery school Kindergarten First, second, or third grade	Regular teacher
University of California, Southern Branch	Nursery school Kindergarten First or second grade	Regular teacher who is director of kindergarten department
University of Cincinnati	Nursery school Day nursery Orphanage Clinic, children's hospital Kindergarten First grade	Regular teacher Psychologist Head of nursery-school department
Western Reserve University	Day nursery	Regular teacher Supervisor of kindergarten-primary department

d. Summary. Examination of the data would seem to indicate a general recognition of the importance to students preparing for nursery-school teaching of actual participation in meeting the problems of children on various levels and from a variety of angles. It further indicates the advisability of supervision of practice by the nursery-school teacher, in coöperation with specialists from various fields. This insures that students who are acquiring the technique of meeting child problems have the guidance of the one who is most familiar with the problems of the specific children and also the guidance of those who are trained in special aspects of child life.

V. Summary

In presenting the data of this study, an effort has been made to indicate the outstanding similarities and differences existing in the procedures of the institutions preparing students for nursery-school teaching. One can discern certain general trends which are of the utmost significance to the nursery-school movement. Various problems also present themselves, the solution of which will determine in large measure the future of the nursery school and its relation to the educational system as a whole.

a. Graduate Status of Institutions Training Students. An outstanding feature is that most of the schools giving training for nursery-school teaching are established institutions of graduate rank. This would indicate that the training of nursery-school teachers is deemed an important matter, to be undertaken only when adequate facilities are available for providing the breadth of training agreed to be essential.

This conclusion is further borne out by the fact that several institutions which recognize the need for offering such courses of training are delaying doing so until more adequately equipped. One[40] institution reports, "Those students who have been very successful in kindergarten-primary practice and are especially interested in the young child may elect practice teaching in the nursery school, but we shall not graduate students for nursery-school teaching until we can train them completely."

Since the preparation for nursery-school teaching is thus being offered almost universally upon a graduate level, a long period of preparation results, and this raises the problem of adequate salary

[40] Milwaukee State Teachers College.

compensation for the students who have taken this long period of preparation.

b. What Should Be the Educational Background of Entering Students? Another important fact is that, as has been pointed out, students who are permitted to prepare for nursery-school teaching are being carefully selected. The students bring to the work maturity and breadth of outlook, because the training is given, in the main, by institutions of graduate rank.

The general nature of the training taken prior to entrance upon preparation for nursery-school teaching seems to be a point upon which considerable scientific study might profitably be done. Should this background be largely academic and cultural? If so, what program of studies will best fit her for her professional preparation? Should her background be more vocational than academic? If so, what should be the general nature of the work covered? Should previous training for teaching of young children form a part of her background? If so, should this training include actual experience with young children? What amount of such experience should be considered adequate to permit her to enter nursery-school training? These questions are still unanswered, but are highly pertinent if an intelligent selection is to be made of those students best fitted for nursery-school teaching.

c. What Personal Characteristics Should Students Have? Another point which should be considered in the selection of such students is that of their personal fitness for nursery-school teaching. To those who deal with nursery-school teachers in the making, it appears that there are certain persons who, try hard as they may, will never be very well adapted to this profession. Though they may be intelligent and have delightful personalities, and though they may manage individual children excellently, their desires and interests do not seem to fit the nursery-school régime. Yet when we consider the personal traits of successful nursery-school teachers we note a wide variety in the types of persons who can do this kind of work well. The personality adjustment and the combination of traits, rather than the predominance of certain characteristics, would appear to be most important.

Doubtless the necessity for considerations of this kind is felt in the selection of students in various institutions, for mention is made of a number of characteristics which it is deemed desirable

for them to have. Two schools ask for personal interviews with students before allowing them to enter the training, but the specific personal characteristics considered necessary are not mentioned.

A brief outline of the personal qualities which best fit one for meeting the exigencies of the situation was made by a group of specialists in the nursery-school field. Surprisingly consistent views upon the matter were shown. The characteristics that this group believes to be essential can be classed, somewhat arbitrarily and with some overlapping, into four main types of traits: personal adjustment to life, emotional control, social adjustment, and mental adjustment.

The traits included under each of these four headings may be summarized as follows:

1. Traits indicating personal adjustment to life:
   a. The nursery-school teacher should have her own life well adjusted. She should have poise and stability. She should be well-balanced and have a sense of proportion; she should have a wholesome attitude toward mental and physical health and should make a conscientious effort to maintain them, and she should not be afraid of work.
   b. She should have a cheerful disposition.
   c. She should have an appreciation of beauty.
   d. She should have a deep sense of spiritual values.
2. Traits indicating emotional control:
   a. The nursery-school teacher should have patience.
   b. She should be even-tempered, showing serenity, a quiet manner that wins respect, and a calm voice.
   c. She should be gentle and calm in dealing with the children, and graceful and unhurried in her movements.
3. Traits indicating social adjustments:
   a. The nursery-school teacher should have sympathy, understanding, and love for children. She must have retained a spirit of play and must be able to appreciate the child's level of development.
   b. She must be impartial.
   c. She must be firm or forceful without being harsh.
4. Traits indicating mental adjustment:
   a. The nursery-school teacher must have a sense of humor.
   b. She must have commonsense and good judgment.
   c. She must be resourceful, creative, and imaginative.
   d. She must be persistent.
   e. She must be open-minded, alert, and observing.
   f. She must be neat and have a sense of order.

Traits which should be avoided in the selection of nursery-school teachers include a sentimental attitude toward children, irritability, a domineering manner, timidity, erratic likes and dislikes, and what is variously described as lack of adaptability, old-maidishness, and a crystallized point of view. Extreme physical defects, nervous habits, such as stammering, and a marked foreign accent are also considered undesirable personal characteristics.

A great deal of harm can be done by a nursery-school teacher whose personality is not suited to the work. Though she may have years of training and a wide variety of experience, unless she has also a personality which brings a desirable response from little children, she can more profitably engage in some other occupation.

The selection of suitable persons for such training should be done either before they enter the course or soon after. Once the prospective teacher is placed in the nursery-school environment and her relationship with the children carefully observed, the clever judge of personality can soon detect the person unfitted for the work. In this way nursery-school teaching will be protected from those who are temperamentally unfitted for the work.

d. The Breadth of Preparation Necessary for Nursery-School Teaching. In the actual training provided for the student after she has been permitted to begin her preparation, there are, as has been mentioned, many differences in procedure. This is, in itself, a significant fact, pointing as it does toward an open-mindedness and freedom from standardization which speaks well for continued experimentation. Even with these differences, there are easily discernible general trends which are important in their implications. Not the least of these is the tendency toward active participation of various departments in the training of the nursery-school teacher, indicating a breadth of preparation for understanding and meeting the problems of young children which could be provided in no other way. This participation raises the problem, however, of the balance in the student's program of studies, a problem which needs intelligent consideration by all interested.

There is evident a growing tendency toward the equipping of the nursery-school teacher for understanding, and participating in, any effort to discover facts and to use these facts to promote the general welfare of the children. Being thus equipped to understand the contributions of specialists and being the person most intimately familiar with the problems of the nursery school as an educational

institution for young children, the nursery-school teacher may conceivably become a most important coördinating agency.

e. The Relation of the Nursery-School Teacher to Research. Closely connected with this tendency to equip the nursery-school teacher for a general understanding of the field of various specialists is also a tendency toward preparing her to carry on independent research in her own field. This seems to be highly significant, since the field of nursery-school teaching is so relatively unexplored that only by bringing to it minds equipped scientifically to discover pertinent facts can the most effective procedure be evolved. The generally apparent feeling that the nursery-school teacher should not only be equipped to participate in the research of others, but to do independent research, will mean, it is to be hoped, an attack upon the curricular problems of that field which may result in increasing effectiveness in meeting the needs of children on the nursery-school level. Such an attack can be made by no person so well as by the nursery-school teacher who is in daily touch with these needs. Initial exploratory studies calculated to disclose these problems to the student, together with preliminary experiments suggestive of methods of approach, might profitably, it seems, form a part of the nursery-school teacher's program of studies.

At any rate, the whole problem of the extent to which the prospective nursery-school teacher should be prepared to coöperate in the research of specialists or to do independent research herself is one worthy of careful deliberation.

f. The Question of the Education of Parents. Of equal importance with the general trends already mentioned is that of preparing the nursery-school teacher for active participation in the program for parental education. The problems raised in this connection are manifold and demand coöperative and open-minded consideration. A few may be cited here:

To what extent may the nursery-school teacher profitably aid in the solution of home problems?

To what extent may she, with profit to all concerned, participate in, or actively conduct, a program of study with the parents?

How much time can parents, with profit to themselves and without harm to their child, spend in the nursery school? What are the advantages and disadvantages of parental participation in the

nursery school? If such participation is advisable, how can it be organized and administered?

To what extent should the nursery-school teacher be responsible for group and individual conferences with parents? What should be the nature of these conferences?

If a specialist has charge of parental education, in what ways can the nursery-school teacher give most effective coöperation?

What practical experience best equips the nursery-school teacher for taking her part in this program of parental education?

g. Practical Experience. The last question brings up the whole matter of the types of practical experience which should be provided. Where should this experience be given? How is it best organized and administered? What are the relative values of intensive and extensive periods of contacts with children? What should be the relationship between this practical experience and theoretical study?

h. Need for Study of Various Problems. These and many other problems await solution. Upon their solution depend the future policies in the training of nursery-school teachers. The task confronting those shaping such policies seems, therefore, to be the determination, through scientific study, of the needs to be met by the prospective nursery-school teacher; of a sound basis for selecting students in the light of those needs; of the organization of a program of preparation which shall equip those students not only to meet immediate needs but also to anticipate further lines of growth and development; and finally the establishment of some sort of standard for determining the efficacy of the preparation offered in the light of the needs of the field.

With teachers thus carefully selected and adequately equipped, the future of the nursery school as the beginning of, and a vital factor in, the educational system as a whole seems assured.

Arising as it has in the very midst of the scientific age of civilization, the nursery school has available for its utilization such a fund of scientific knowledge as has probably never before been available to any educational institution at its inception.

Closely allied with the discoveries of significant scientific facts is the application of scientific method to the solution of educational problems and the resultant gradual emergence of a science of education.

With this ever-increasing mass of scientific knowledge at hand, with this developing insight into a scientific method for the solution of educational problems, the nursery school is confronted with such an opportunity and corresponding responsibility as the whole history of education shows has never before confronted an educational institution.

Not only is it in a position to set its own standards and meet its own problems in the light of scientific fact, but further, as the latest comer in the field of education, it will conceivably influence the standards and point the way to the solution of the problems of every other field of education as well.

CHAPTER XIV

TRAINING FOR THE FIELD OF PARENTAL EDUCATION

I. Introductory

1. Need for Leaders in Parental Education

Parenthood, one of the oldest of human responsibilities, is at present one of the most recent concerns of education. The individual parent has struggled single-handed with the problems of the older generation since civilization began, but it has been only a few years since the community became aware of the fact that the most universal responsibility for the welfare of human beings has been given little or no systematic consideration. Public and private agencies have taught for some time numerous facts and techniques that are needed by the person who pursues the task of parenthood intelligently, but it was not until the *problem* of parenthood emerged through destructive social experiences that it became an entity in the field of education. The movement for adult education, with its emphasis on effective teaching methods and the rapid increase of information in regard to the mechanisms of the developing individual, gave added impetus to this work. It soon became evident that parental education involved more than the necessary facts of child development and the skills and information needed to administer a successful household. Primarily it was concerned with the educability of adults who are the parents of an oncoming generation and of the ways in which the resources of the community may be directed toward making them better individuals, more effective educators of their children, and satisfactory members of a family group.

It is largely because of the fact that parental education is concerned with a human problem, rather than with a body of technical material, that the personnel of the field is made up of leaders instead of teachers. Since parenthood is distinctly a social responsibility, the function of the parent educators is primarily a social one. The teacher need be concerned only with partial responses, with specific problems and situations, but the leader must take into account not only what may happen to a particular indi-

vidual under certain conditions, but all the factors that make up that individual and his environment and how they may both be modified for the good of the social group. Since being a parent is a widespread social experience and since the community is only beginning to become conscious of the fact that many of its ills may be traced to unintelligent parenthood, there is urgent need for adequate leadership in bringing fathers and mothers to an appreciation of both the responsibilities and possibilities of parenthood. The facilities at present are meager in the trained leadership available and in the provisions made for educating children in anticipation of parenthood and parents while they are engaged in the actual experiences of parenthood.

2. The Wide Variety of Agencies Undertaking Parental Education

This need on the part of parents facing the problems of the education of youth in a rapidly and fundamentally changing civilization, themselves bereft of the help which in a more settled period might have been derived from a former generation, is being considered by a wide variety of social institutions and organizations. A study[1] now in progress of eighty-six parental education leaders scattered over twenty-two states shows that about one quarter are connected with colleges and universities, nearly one quarter are attached to public schools and churches, and more than one half to educational organizations and social service agencies. The last group includes fifteen different types of organizations and agencies, representing various levels of interest and many kinds of problems. Clinics, informal child-study groups, parent-teacher organizations, rural clubs, local councils of parental education, social service agencies, public health centers, child-welfare associations, mental hygiene organizations, and national associations for the study of children's and parents' problems are among the number. Some of them are concerned with teaching women with college educations; others serve all social groups.

It augurs well for the future of the movement that parental needs have been expressed through nearly every type of private organization and that parent education is going on in as many kinds

[1] A study of methods used in parental education groups by Myra de Haven Woodruff, fellow of the National Council of Parental Education.

of groups. So long as the contact between parent and educator is direct and is able to escape the formalizing influence that is so often characteristic of public education, and so long as leader and parent may be able to consider jointly everyday family experiences in terms of human values and in the light of scientific knowledge and skill, parental education will go forward with the stability of an institution and the vitality of a crusade.

3. Need for Various Types of Leaders

Since the obligation of parental education is to develop parents for the many-sided function of parenthood, it will need to enlist in its service leaders of one kind, but of many moulds. The parent educator, because he is engaged in forwarding a movement representing a network of social functions, must necessarily be like-minded with every other parent educator in achieving the successful adaptation of parental personalities to the ever-changing requirements of child development. He must share with his professional associates a common faith in the capacity of adults for constructive growth and a common ability to develop this capacity in the service of parenthood. He must have a common understanding of the many factors involved in successful family life and individual development and a common desire to contribute his section to the kaleidoscopic design of parental education. He must be a teacher of adults in the largest sense of the word and an intelligent participant in a social movement made up of diverse interests, while at the same time he must perform a peculiar function which may vary considerably in its degree of specialization.

It is obvious that the persons who help parents to adjust their own personalities to the needs of a family, who teach them the facts and methods concerned with developing childhood, and who stimulate the unfoldment of a sound philosophy of living must necessarily have a broad training in the field of education, an understanding of the operation of social forces, and an intimate knowledge and skillful technique in one or more of the many arts and sciences which contribute to the welfare of individuals and homes. The need of a parent is a composite of his need as a growing adult and of the need that arises from his responsibility as a parent and as a member of a family group. Since the average parent has had recourse only to imitation and the trial-and-error method in his effort to

become a satisfactory father or mother, the inadequacy of his resources becomes glaringly apparent under the strain of certain social pressures. These deficiencies which have come to light in child-guidance clinics, all types of public health and social service agencies, in study groups, student bodies, nursery schools, parent organizations, churches, and through physicians and psychiatrists might be classified under the following heads: (1) lack of knowledge of adult and child needs, (2) lack of skill in solving parental problems, (3) inability to utilize successfully the resources of the family, (4) personality and other defects, and (5) a philosophy of life which prevents wholesome development of the members of the family. Is it any wonder that parental education even in its first years has enlisted in its service more or less spontaneously a wide variety of parental educators both of individuals and of groups?

The individual parent may have need of many kinds of teachers, ranging from the physician, the psychiatrist, the nurse, the educator, the psychologist, the home economist, and other specialists who give him individual attention, to the persons who teach him the physical care of his children, give him information in regard to child development, techniques of educating his children and of managing his household, and tell him how to take his part in the family and the community as a parental adult. The field of parental education needs, in addition to these, leaders in research, organization experts, writers, and philosophers. The following outline classifies the functions of leaders in a suggestive way.

Functions of Leaders in Parental Education[3]

A. Technicians
   1. Research technicians who will furnish scientific data upon which this new form of education is to be based
   2. Applied technicians, who will develop techniques for administering these scientific data in practical situations

B. Organization Specialists
   1. Persons who will develop capacities for organizing special groups (communities, counties, states, etc.) for purposes of parental education
   2. Persons already affiliated with organizations or institutions, who will exercise leadership on behalf of parent education as one part of a more general program

C. Non-professional Leaders
   1. Persons who will be enlisted by A2, B1, and B2 for purposes of organizing, promoting, and conducting parental education enterprises
   2. Persons who will be called upon to function as teachers for parental education enterprises in lieu of trained, professional teachers

D. Professional Teachers
   1. Those who have prepared themselves for the special task of parent education and who derive their income from this source
   2. Those who teach allied subject matter and adapt it to the uses of parent education
   3. Those who derive their main income and give their chief allegiance to another professional group, but who devote a portion of their time and derive a portion of their income from parent education

(A fifth group, called coördinator or philosopher, might be added, but ordinarily movements do not develop this type of leadership until they are well settled.)

4. Backgrounds of the Present Personnel

It is astounding that parenthood is so frequently taken as a matter of course when it is realized how many highly developed and technical subjects are drawn upon for the training of parents and professional workers in this field. The present personnel is both trained and untrained, but it suggests the type of person who finds something in past experience that contributes to parental needs. Where it has been effectively educated for this service, it offers an opportunity to observe the value of such preparation. The study of eighty-six leaders already mentioned has interesting data to offer on the background of the persons who are holding professional positions and of those who are performing semiprofessional and lay service. About two-thirds of this group are married and have children; four are widows. Over two-thirds of them have completed four or more years of work beyond high-school graduation, and fully half have done graduate work in some field. The majors in college and normal school represent twenty-eight different subjects in languages, history, mathematics, economics, science, psychology, sociology, business, education, home economics,

[2] From an unpublished outline by E. C. Lindeman.

and nursing. The majors were most frequently in English, education, and home economics.

The experience of this group is even more varied than its academic preparation. Nearly all the leaders have had homemaking experience—over a third of them for more than ten years. Teaching of various kinds, including the high school, kindergarten, and primary grades is the most common type of experience represented. Other fields which have attracted parental education workers are supervision, home economics, psychology, religious education, and secretarial work.

It is interesting to note that the leaders reporting in this same study show a median of two to three years' service in the organization with which they are connected and a median of one to two years in their present line of work. This fact, in the light of previous remarks, probably indicates that the pressure for leaders in the parental education field has pushed the most suitable candidates from the standpoint of training which is most closely allied to parental education and of homemaking experience into the vanguard of the movement. The strategic positions in most cases are manned by persons who have had extensive graduate training and experience in some field closely allied to parental education. It is their ability as educators and the fact that they are developing in educational centers programs of teaching and research which lend stability of organization and soundness of content to the field.

A similar situation is reported in a recent survey of schools and colleges.[3]

A more intensive study[4] of the background of child training specialists in the Smith-Lever Extension Service indicates that eight of the ten workers reporting have had special work in child development of graduate rank and that their experience before they undertook this project was in the field of lower primary, elementary, and high-school teaching, practice teaching in nursery schools, and public-health activities.

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[3] *Child Development and Parental Education in Home Economics; a Survey of Schools and Colleges,* by Anna E. Richardson and Mabel L. Miller. American Home Economics Association.

[4] *Present Status of Child Study and Parent Education as an Extension Project,* Child Care and Training Extension Committee of the American Home Economics Association.

Parental education is too new a venture to have among its ranks many workers who have been trained for this particular service. In fact it is so new that few institutions have yet developed a department or a major in this field. It is to be expected, therefore, that those who are now its leaders should bring to it a wide variety of the subjects which contribute to this division of education and that in many cases they have little to draw upon in their formal education for service along this line. It is obvious that in some instances both the motive power and the preparation for parent leadership have been derived from the practical experience of being a parent.

II. The Education of Professional Leaders

1. General Opportunities Offered for Training in Parental Education

Opportunities for professional training in the field of parental education are available in about half a dozen institutions of university rank, but in only one of them does it have the emphasis of a major subject. In three cases courses in parental education are offered in child welfare institutes in connection with courses in child development. Courses in the long list of subjects which contribute to parental education and which in many cases are an essential part of it are given in a large number of colleges and universities and social service organizations, but in only a few has the problem of parental education become clearly enough defined to be given distinct consideration. The courses in parental education as they are now being given emphasize different phases of the problem. Most of them are of graduate rank and tend to be alike in including a consideration of subject-matter organization and methods of teaching parents; they usually provide opportunity to observe and conduct parent study groups.

Since the subject matter and experience necessary for professional training in parental education must be drawn from many fields, and since the scope of parental education has yet to be defined, the practice in advising students who were prospective workers in this field has been to include in their course of study those subjects and experiences which would tend to give them a fundamental understanding of children, a basis for sound teaching

method, and an opportunity to apply the subject matter of their former major field to the problems of parents. This effort to utilize a special line of subject matter in the service of parents and to enlarge the scope of the student's understanding of parental problems by selecting his courses from every corner of the college campus is the first step in what promises to be a complex and highly developed division of education.

2. Fellowships in Parental Education

a. Why Offered. The enormous emphasis given to the significance of the preschool years has probably been more responsible than any one factor for the sudden stimulation of parental education. Parents and educators alike have become aware, almost over night, of the fact that if the first years are the most important ones in the life of an individual, the parent who is the child's chief educator during that period is the hope or the despair of his future development. The inadequacies of parents in the face of a rapidly changing social structure have added to the insistence that parents must be educated and educated without delay. This pressure has forced into the field persons who have had partial training as well as those who have had experience but no training of professional grade for the need at hand. Professional leaders in allied fields, realizing that there were many persons trained in some one of the specialties of parental education who showed promise for this field and who might be given a significant start in parental education in one year, inadequate as that beginning might be, coöperated in the establishment of fellowships in parental education and child development under a grant of the Laura Spelman Rockefeller Memorial.

b. Machinery for Award. Applications for the fellowships were made during the first years of the grant to the Committee on Child Development of the National Research Council and were awarded by them in connection with the appointment of the National Research Fellows in Child Development. In 1928 the administration of the National Scholarships in Parental Education which were the equivalent of the fellowships formerly awarded was undertaken by the Scholarship Committee of the National Council of Parental Education. The committees concerned with the ap-

pointment of the two types of scholarships coöperated in choosing the successful Parental Education candidates.

c. Appointments. For the academic year 1926-27 seven parental education fellows were selected and placed in the following institutions: Columbia University, the University of Iowa, the Merrill-Palmer School, and the University of Minnesota. All of these fellows attended two institutions during the twelve-month period, and several went to a third institution for the summer session. During the year four fellows were appointed to pursue special lines of work. In 1927-28 eight regular and one special appointments were made and allocated to the same institutions by the peripatetic plan. Ten appointments were made for 1928-29 and the group of institutions was increased by the addition of the University of Cincinnati, Cornell University, and the University of North Carolina. Two of the present scholars expect to remain for the entire period of their appointment in one institution pursuing a special line of work, while the others will attend two or three different institutions.

The plan of providing an opportunity to study in more than one institution has been an advantage during these early years of the development of the parental education field because in no one institution is a complete program available or an adequate point of view expressed. It has had its disadvantages in making it difficult for the scholar to accumulate credits for a degree which she could achieve by spending the year in one locality, and in some cases it has contributed to confusion rather than integration of the scholar's work. Since it is desirable at this stage of development to avoid overstandardization of the program, the peripatetic method will continue to be used. Where students have needed to remain in one institution to develop a special problem of investigation or research or to follow a definite line of study, they have been permitted to do so.

d. Selection of Candidates. The committee in charge of awards set up personality, academic, and experience requirements as a basis for choice. They were interested in securing candidates who had social ability, ability to teach effectively, and organizing and executive ability, and who were good students, effective in research, and skillful in working with children. They did not require superiority in all these lines of work, but the selections made indi-

cate that the group chosen was uniformally high in social ability, student ability, and ability with children, and that its members tended to be high or to show decided promise in executive ability, research, and teaching. In every case a bachelor's degree was required and preference tended to be given to candidates who were especially equipped for and who were interested in a well-rounded program of work. The satisfaction of university requirements for advanced degrees was a secondary consideration. So far, all the fellowships and scholarships in parental education have been awarded to women, although men may qualify for them.

e. Qualifications. The undergraduate majors of those who have qualified for scholarships in parental education represent a wide variety of college subjects; over half the number, however, specialized in home economics, usually in the field of nutrition, for their bachelors' degrees. Most of the group had done graduate work before receiving the scholarship. The graduate specialties were also distributed over many subjects. The experience of the group was confined to teaching, social work, and public health nursing. All the group had bachelor's degrees; about half the number had a master's degree; at least five were definitely working toward the doctorate.

f. The Curriculum. It was the judgment of the Scholarship Committee that the scholar's program should include four types of work, so arranged that the content courses would occupy not more than fifty percent of the scholar's time. The following plan was suggested as a basis for the scholars' curricula in the various institutions:

A. Group Experience
   1. Experience with groups of parents, as in study groups
   2. Experience with groups of children, *e. g.,* practice teaching in nursery schools

B. Individual Experience
   1. Experience with individual parents
   2. Experience with individual children, as in clinics, consultation centers, and homes

C. Observation
   1. Observation in child study groups
   2. Observation in nursery schools, progressive education centers, etc.
   3. Observation in institutions and agencies dealing with problems of the family and children

D. Courses

The content courses should be selected to supplement the previous training and experience of the individual scholar.

The peripatetic method was recommended, but in certain instances this was to be modified to meet individual needs.

The policies of the various institutions receiving the first scholars in parental education varied somewhat in the emphasis placed upon research, instruction, parental education, and child-welfare service. One placed instruction, another research, and a third parental education first in order of importance, while the others had a policy of equal emphasis on all four.

There were 166 courses with different titles offered in the five institutions to which the scholars in parental education were assigned which were taken by students specializing in child development and parental education. Sixty-six of these were taken by the parental education scholars. Fifty of this number could be classified under four heads: psychology and mental development, education, physical development, and research. The courses taken by the largest number of scholars were advanced educational psychology, mental growth and development of children, psychology of exceptional children, physical growth of children, parental education, educational methods with young children, philosophy of education, and research in child development. Other courses which were included in a number of the programs were mental and educational tests, behavior problems, anatomy of the foetus and child, health care of children, clinical work, and child training. Participation and observation in nursery schools and observation and practical work in weighing and measuring children were provided for some of the scholars.

The curriculum in general is based upon certain fundamental needs in the field of parental education: *viz.*, a philosophy of education, educational methods for children and adults, an understanding of physical and mental development and methods of research. The advisors in charge endeavored to maintain an experimental attitude toward the problem of constructing curricula for students in this field while the work was in its early stages and the needs and possibilities of leaders were not clearly defined.

g. Positions Taken by Scholars. In each case the scholar, after the period of her appointment, has taken a position of leadership

on the staff of an institution of college rank or in connection with public education. Two have become directors of departments of home economics in universities; one is with the Federal Board of Vocational Education; two are on university extension staffs working in parent education; another is director of the department of home economics in a city school system; one is a nursery-school principal connected with a university; others have parental education positions in public schools and nursery schools or are training teachers in allied fields. It is interesting to note that a number of scholars in child development research[5] have gone into the parental education field and have taken similar positions in nursery schools and extension services and in university departments of home economics and child welfare institutes.

III. Development of Lay Leaders

1. The Needs for Lay Leadership

Any movement that arises out of a universal human need secures its vitality and maintains its human value in proportion to the amount and quality of lay leadership it is able to rally to its cause. An ideal situation for effective learning is in the community where the lay people, led by some of their own number, voluntarily coöperate with professional leaders on an educational program of vital concern. Such a situation is a continual challenge to the professional educator to interpret scientific facts in terms of everyday problems and to utilize local resources to serve local needs. Irrespective of the number of professional leaders with which a community is supplied, there is need for lay initiative, because in no sense are lay and professional leaders substitutes for one another. Each unit requires its own spokesman, for a group without its leaders is inarticulate; it cannot voice its needs, express its desires or promote its projects. The group is fortunate, therefore, whose leader is one of its own. Since parental education is such a widespread and urgent need, it has demanded lay leadership of a high order. Parents have wanted more than facts: they have begged for advice on difficult problems; they have searched for opportunities to become trained or at least to observe those who were skilful in the handling of childhood difficulties. The very increase in their knowl-

[5] For a discussion of these scholars, see Chap. XII.

edge and insight has itself increased the demand for help. The more intelligent a person becomes, the more eager he is for effective service. The lay leader has needed to be both resourceful and wise in guiding her group in an appreciation of their predicament and in finding a safe and suitable way out.

The layman sees in terms of problems, rather than in subject-matter units, and material never loses its meaning while it is in a parent's hands. Because a parent is both a producer and a consumer of human values, parenthood lends a unique contribution to human truth. Many of the projects which affect the welfare of parents and children will require the vigor of lay initiative for their accomplishment. In the coöperation of lay leaders there is unique promise for certain lines of parental investigation and research.

One of the most pressing needs of the community for lay leadership in parental education is in connection with the school. So far there has been a good deal of leadership on the part of interested parents in directing groups in coöperative enterprises of concern to the home and school. Little has been done in training leaders to appreciate the fundamental problems of teachers and parents in supervising childhood and youth and to direct local coöperation in solving some of the conflicts that arise. In districts where it is difficult to secure professional leadership and where stimulation and help with parent difficulties from books and current literature is limited, lay leadership that is awake to local conditions is desperately needed. There is hardly an organization in any community that deals with human problems that would not be more wisely directed in its program by the help of one or more lay persons who had more than the average understanding of parent and family problems, so intricate and widespread are the interests of the home.

Fortunately for the community, many teachers, religious educators, nurses, social workers, and other professional leaders who are dealing with parents have become aware of their need and have joined the ranks of lay leaders in this field. Many of them have taken professional training and assumed responsibility for promoting the movement, but the largest number are interested in understanding the educational problems of the parents of the children they know and in appreciating the possibilities of the family in wholesome community life.

2. The Background and Functions of Lay Leaders

The educational training of lay leaders now in service ranges from those who have had high-school advantages to the person who has done graduate work. There tends to be a large number of them who have had a partial or complete college course. There are few, however, who have had professional preparation for this service. Most of them have had home-making and parenthood experience and are imbued with a zeal for getting and imparting an education in family life that has been left out of their school careers. Some of these leaders have other professions somewhat allied to parent education and are giving part time to the conduct of study groups.

The functions of the lay leader in parental education are of many kinds and degrees and in some cases vary in direct proportion to the faith of the professional leaders who are supervising them and to their ability to develop leadership in lay groups. Many lay leaders are organizers of study groups, officers or board members of welfare agencies, and promoters of community, county, state, and national projects that have to do with child welfare or parental problems. Others are leaders of discussion groups where reports on various topics are given, and there are some who teach subject matter which they themselves have collected or which has been given them to teach by some professional leader. There is considerable difference of opinion in regard to what the functions of lay leaders should be. The problems of parents so frequently require professional attention that there is need for an understanding on the part of the lay leader as to whether her activities shall include anything besides direction to source material and a discussion limited to the opinions of authoritative writers or whether it may be extended to the giving of advice on special problems. Since the supervision of lay leaders is necessarily limited, it is difficult to determine what the practice is, but professional standards require that the lay person should be sufficiently aware of the situation to appreciate the importance of referring significant problems to the attention of specialists in the field.

One of the chief values of lay leadership in any community or special group is the direction given toward setting desirable standards for family life. A lay leader may be invaluable as a center of influence in developing more wholesome attitudes of parent-child relationships, in setting up better standards of child care and pa-

rental supervision, in distributing simple scientific information, and in recommending the use of authoritative publications. If she is skilful in the use of the discussion method, she may go far toward helping a group to become aware of its ideals and methods, and toward bringing parents and youth together in a common understanding of their common task. If she has rare insight into family problems, she may become a source of new light on some phase of parental responsibility and a possible coöperator on a professional project to discover new facts. If she is a satisfactory parent, she provides the community with a demonstration in education which is worthy of recognition in the field.

3. The Development of Lay Leaders

One of the most important functions of the professional leader in parental education is to discover and develop lay leadership. A considerable amount of this type of leadership has arisen spontaneously when there was need at hand and has been responsible for some of the important parental projects in the country to-day. In certain spots where belief in the effectiveness of local initiative is strong, a systematic effort is being made to find and develop lay leaders in this field. One educational organization for child study has offered intensive training conferences of two days' to four weeks' duration to leaders and prospective leaders in the content of child development and parental education and the technique of organizing and conducting child-study groups. Seminars and lectures were conducted by recognized specialists and by members of the organization's staff and opportunity to observe and participate in study groups was provided. Regular and special study groups meeting throughout the winter are also used for training leaders. A similar type of leadership is being developed in connection with a county organization for social service. Leaders from various communities have met weekly during the fall and winter to receive training from a professional worker on topics relating to child development and parental problems. They have conducted groups of parents in their own and other communities on the topics discussed at the training meetings and from the material offered and references suggested have added other discussion topics.

In another section of the country, local leaders are trained in the Smith-Lever Extension Service in child care and parental edu-

cation. Rural women, a number of them college graduates, come to centers in the county and are given special instruction by the state specialist. This training has been supplemented by a two weeks' training conference held at the college for advanced leaders. The program includes a study of goals for parents, the problems of child feeding, habit formation, and behavior difficulties. These leaders conduct groups in their own localities and stimulate many home and community projects which affect better family and child life.

A state department of education, in coöperation with city education departments, is engaged in training leaders who are leading small groups. Their topics include the implications of individual differences, the nervous system, play, means of expression, control and direction of conduct, adolescence, and integration of personality. The training provides for observations in nursery schools and homes, reference reading, and participation in discussion. Plans are under way to intensify the training of leaders in schools, clubs, and churches, and thus add to the effectiveness of parental education in these communities by training persons who are already professionally educated in, and who are in charge of, pieces of work closely allied to parental education.

This effort on the part of public and private agencies to train leaders has had several important results. It has given fathers and mothers a respect for and an insight into their jobs; it has brought parents in touch with scientific methods and information and the scientist in touch with family experience; it has awakened the community to an interest in other people's children; and, perhaps most important of all, it has stimulated an insistent demand for widespread education for parenthood by parents themselves.

IV. Present Problems

The problems of leadership development are largely concerned with (1) the discovery of persons who are good investments for training, (2) the education of these prospective leaders, (3) the dangers of premature specialization, (4) the supervision of lay leaders.

The field of parental education has yet to discover the characteristics of the effective worker, but it is at present interested to discover persons who have the qualifications which are possessed

by some of the successful leaders in the movement. The problem is to attraet persons who are young, yet who have demonstrated their ability to work with adults, and who have had sufficient training in some speeialty to be effective teachers in it. With sueh a baekground, it is hoped that a student may be able within a reasonable time to secure an appreciation of the field as a whole and to beeome a skilful worker in some division of it.

The difficulties in regard to the preparation of leaders are eoneerned chiefly with the limited interpretation of parental education and the few opportunities offered for a well-rounded eonsideration of the functions involved and for training which is adequate.

The dangers of premature specialization are eoncerned with that type of speeialization which causes 'blind spots' and which prevents the specialist from seeing wholes. The problem yet to be solved is how to provide the specialized training necessary to meet the speeialized funetion without losing the integrated point of view.

The supervision of lay leaders is almost an untouched problem. With more professional service available in the future, a greater amount of supervision will be possible, but the problem at present is how to provide the supervision needed to ensure satisfactory work with the help at hand. A question worth considering is to what extent the training of lay leadership is justified where its supervision is lacking or inadequate.

PART II

RESEARCH AND METHOD

CHAPTER I

PRESENT STATUS OF RESEARCH IN CHILD DEVELOPMENT

I. Introductory

1. Renewed Interest in Preschool Research

It is too early to attempt any historical appraisal of the present scientific activities in the field of child development. In a certain sense the preschool child, both as an educational and a hygienic problem, has been only recently rediscovered. We are in the midst of a movement, both humanitarian and scientific in temper, which is conferring an altogether new social status upon the early period of childhood. The present yearbook is a symptom of this period of transition. It is significant that only ten years ago such a volume could scarcely have been either projected or launched.

In a certain measure the current activities in the field of child development were anticipated by both the popular and academic phases of the child-study movement of the eighteen nineties. That movement, in spite of its limitations, was at least a characteristic American movement, and it prepared the way for the present-day outlook upon the problems of child development. It is possible that the deficiencies and limitations of the earlier child-study movement and the cumulative improvement of investigatory methods will rest the present-day movement on a broader and somewhat firmer scientific foundation. It remains to be seen.

2. Organization of the Section on Research in the Yearbook

The present section of the yearbook (Part II, Section 1) is organized to give a summary view of recent and current research in the diversified field of child development. In order that the material may have concreteness some 238 publications are listed by title and briefly analyzed as to problem, method, and results. Many other studies are listed by title only.[1]

[1] Some of the titles are twice listed because of their bearings on different fields of knowledge.

It is not assumed that the ordinary reader will read the text of this section continuously. The material has been classified and arranged alphabetically by authors to give it a handbook kind of serviceability. However, a cursory continuous reading of merely the titles might well be recommended as an effective method for gaining an impression of the vast range of scientific work which underlies the scientific study of child development.

In addition to the reference value of these titles and abstracts the Committee has had in mind the historical purpose of this yearbook. We may be certain that the student of the nineteen forties, fifties, etc., will find in this summary of recent and current research a convenient picture of the status of present-day knowledge. Doubtless he will find some titles of purely antiquarian interest and a few which will justify the smile of his humor, but this will make him the more appreciative of a current record which confessedly does not try to sift too critically the potential value of all the items.

3. Definition of "Child Development"

The term "child development" resists precise definition. It is of course a broader term than "child psychology." It is intended to embrace the anatomical, physiological, and embryological, as well as the purely mental aspects of development. Indeed, the term "development" in its broadest sense is a unifying concept which supersedes the old duality of mind and body. In this sense the study of child development is a subdivision of human biology and represents a correlation of all the psycho-biological sciences upon the focal problem of the early development of the individual. In the present section the studies are rather strictly limited to the prenatal, neonatal, and infancy periods and the period of early childhood.

II. The Committee on Child Development

The scientific status of the problems of child development received formal recognition in the organization in 1922-23 of a Committee on Child Development under the Division of Anthropology and Psychology of the National Research Council. This Committee took the name of the Committee on Child Development in 1925. Its executive secretary, Mervin A. Durea, has an office in the build-

ing of the American Academy of Sciences at Washington, D. C. The committee was organized to coördinate and integrate the research activities and interests in the country and to stimulate research in needy fields. It has assisted in the administration of fellowships and scholarships in the fields of Child Development and Parent Education. It has sponsored two national conferences on Child Development, the first at Bronxville, New York, in 1926, the second at Washington, D. C., in 1927. These conferences were nation-wide in scope and were attended by representatives from the fields of anthropometry, nutrition, eugenics, psychology, mental hygiene, pediatrics and psychiatry. The National Research Council Committee on Child Development has published a Directory of Research in Child Development.[2]

III. Extent of Research in Child Development

1. In Published Material

The same committee also issues a valuable quarterly of Child Development Abstracts and Bibliographies. The second volume of this quarterly, completed August, 1928, listed 1232 titles. The complexity and correlational tendencies of modern science are reflected in the fact that the *Abstracts of Child Development* are in turn selected from the current numbers of a dozen journals and abstracts,[3] some of which are themselves the clearing house of innumerable contributing journals, foreign and domestic.

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[2] Compiled for the Committee by Leslie Ray Marston. Reprint and circular series of the National Research Council, No. 76, March, 1927.

[3] These journals are:

1. The Journal of the American Medical Association.
2. The Journal of Nervous and Mental Disease.
3. American Journal of Physical Anthropology.
4. The Wistar Institute Bibliographic Service.
5. American Journal of Diseases of Children.
6. Archives of Neurology and Psychiatry.
7. Psychological Abstracts.
8. Physiological Abstracts.
9. Biological Abstracts.
10. Chemical Abstracts.
11. Mental Hygiene.
12. Endocrinology.

2. In Personnel

The *Directory of Research in Child Development* compiled in March, 1927, by Dr. L. R. Marston, then secretary of the Committee on Child Development, gives a fair statistical picture of the personnel and subjects of research at that time. Seven hundred and fifty administrators of medical and educational institutions were canvassed to report members of their staffs engaged in research in child development. The total number of researchers listed in the directory was 425. The list includes investigators of professorial rank and research associates and assistants distinctly above the graduate student level.

Marston's map of the geographical distribution of 418 scientists engaged in research in child development in the United States in 1927 shows that research tends to be concentrated in university centers. This clustering has been accentuated by the establishment of research institutes and clinics which aim to bring into close association groups of workers in different disciplines and departments. The following is a list of American research centers which give more or less emphasis to problems dealing with the early phases of child development:

University of California (Institute of Child Welfare)
Columbia University (Institute of Child Welfare)
State University of Iowa (Child Welfare Research Station)
Johns Hopkins University (Department of Psychology)
Merrill-Palmer School
State University of Minnesota (Institute of Child Welfare)
Washington Child Research Center, Washington, D. C.
Yale University (Yale Psycho-Clinic)
University of Toronto, Toronto, Canada
McGill University, Montreal, Canada

3. In Subjects of Research

The range of organizations canvassed in the research survey of the Child Development Committee was a wide one. The returns therefore throw an interesting light on the distribution of emphasis among various lines of research. The percentage frequencies are summarized as follows in the present tense (for the year 1927):[4]

[4] The distribution by percentages here given totals more than 100 percent because some investigators are working in two or more fields and furthermore the fields are not mutually exclusive.

Twenty-four percent are engaged with problems of anatomy and physical growth, including general bodily growth and anthropometry; influences on growth, relationships and comparisons; the anatomy and growth of parts and organs; and embryological and fetal anatomy and growth.

Twenty-six percent are active in the fields of health and disease in their relations to child development.

Eighteen percent are working on problems of nutrition, diet, and metabolism.

Twenty percent are working on problems of mental development and behavior other than intelligence measurement and mental hygiene.

Twenty-one percent are studying behavior and habit problems, personality traits and personality adjustment, emotional balance and general mental hygiene.

Nine percent are concerned with intelligence and its measurement.

Eight percent are working on educational problems concerning the curriculum and organization of early child education, the educational abilities and achievements of young children, etc.

Four percent are studying home and family influences on child development.

Seven percent are investigating problems of heredity, eugenics, and evolution.

Five percent are studying endocrinological factors of child development.

Eight percent are concerned with animal research relating to child development in such fields as behavior and learning, embryology, endocrinology, growth, heredity, neurology, nutrition, and metabolism.

Five percent are investigating mental and physical relationships.

Several minor groupings we pass without enumeration.

IV. Scope of the Present Survey of Research

The investigational work summarized in this part of the Yearbook includes most of the fields just listed, but favors those studies which deal with the developmental and educational psychology of infancy and early childhood. A chapter on physical growth studies is included in order to emphasize the fact that an adequate approach upon even the educational aspects of early development must take into account bodily as well as mental factors. Ultimately a scientific formulation of the laws of development will probably correct many false notions based on the ancient antitheses of mind and body and of heredity and environment.

The abstracts of studies reported here have been classified under five headings: (1) motor development, (2) language develop-

ment, (3) intellectual development, (4) emotional and social development, and (5) physical growth.

A critical discussion of the present status of knowledge has been embodied in the text covering each of these five fields. To this discussion brief comments are here added by way of introduction and orientation.

1. Studies of Motor Development

The studies reported in Chapter II of Part II were gathered through six different channels as follows:

1. *Psychological Index* and *Index Medicus,* 1920-1927.
2. *Psychological Abstracts* and *Child Development Abstracts.*
3. Abstracts and general reviews in the *Psychological Bulletin,* 1920-1928.
4. Directory of Research in Child Development (1927).
5. Correspondence with research centers in the United States (1928.)
6. A partial search through the files of such journals as the *Archives of Neurology and Psychiatry,* and a number of representative foreign sources.

The variety of sources from which these motor studies are compiled is indicative of the diversity of the avenues of approach which converge upon developmental problems. As many as ten different types of study are discernible, ranging from the analysis of the reflex motor patterns of laboratory animals to experimental investigations of skills and habit formation in nursery-school children.

Although the reader will not be asked to make a synthesis of all these findings, he will, perhaps, gain a valid impression of the cumulative promise of fundamental research in this field.

Several of these studies deal with the foetus and newborn child. Out of a total of some sixty studies abstracted, fully two-thirds are devoted to the period of infancy, prior to the age of two years; one-third is devoted to the later preschool period and includes investigations of practical habits like dressing. The preponderance of studies relating to infancy suggests that this period is considered fundamental to an understanding of the motor traits of the young child. Comparatively little research has, however, been expended on the hygienic aspects of the subject.

2. Studies in Language Development

The chapter on Language Development (Chapter III, Part II) is based on an exhaustive analysis of existing literature and constitutes a valuable review of this subject. The relative concreteness and objectivity of language studies and the close relation which language holds to other aspects of the child's thinking and conduct make this a peculiarly important field of research.

Here, the great majority of studies now available refer to the later preschool period, and there is a relative paucity of satisfactory material on the period of infancy. The whole field of early language development is fundamentally very complicated and will ultimately need an elaborated technique for adequate investigation. Piaget, however, has shown in his two volumes on *The Development of Child Logic* that much can be done with relatively simple methods supplemented by the requisite clinical insight. Piaget's studies are especially to be commended for the fresh light which they cast on the mental processes, and incidentally on the personality of the young child. The child has his own peculiar logic and it is different from that of the adult. This difference is well worth understanding for reasons of educational as well as of genetic psychology. The scientific study of language promises to put into clearer outline the distinctive but easily overlooked characteristics of child mentality.

3. Studies of Intellectual Development

The studies reported under this heading (Chapter IV) are relatively few in number (35). Until recent years the investigation of intelligence has been largely confined to children of school age. The congregation of school children in large groups, their accessibility, their greater docility, the opportunity for statistical treatment of data, the traditional emphasis of intelligence as the central factor of academic education—all these considerations served to delay a systematic study of mental abilities in children of preschool age; but here, as elsewhere, it has become increasingly apparent that the basic factors which make for differentation in the school population also make for corresponding differentiation in humanity at the lower age-levels. The laws of learning, the symptoms of brightness, dullness, retardation, acceleration, and

even of distinctive talent, may be sought in the characteristics of the infant and of the prekindergarten child.

It would be unfortunate if the educator seized upon this chapter relating to intelligence merely because it bears the most apparent continuity with the problems of elementary education. It is probable that in planning for the welfare of the preschool child the factor of intelligence should play a more modest rôle than it has in the organization of public elementary education. The measurement of intellectual abilities, however, has one far-reaching salutary outcome for children of all ages. It leads to the recognition of individual differences.

The studies on mental growth recorded herewith reveal several approaches to the early determination of individual differences in the intellectual potentialities of young children. The limitations of ordinary psychometric methods are pointed out. The general drift of the data indicates that individual differences will ultimately be discovered and appraised even in infancy. As the social and scientific provisions for such individual psychology are perfected, the parent and the home will anticipate the teacher and the school in the task of adjusting education to the individual nature of the child.

4. Studies of Emotional and Social Development

No subject has so successfully resisted scientific inquiry as the very real, but elusive, problem of human personality. No chapter in general psychology is at present more chaotic than that which deals with the instincts, emotions, temperament, and character of man. The National Research Council called a conference in 1926 on the experimental study of human emotions, with the hope of defining the problem and possibilities of method. The more fundamental attacks upon the problem lie in the future.

The studies assembled in Chapter V reflect the scant beginnings which have been made in the American investigations of this field. The abstracts do not indicate important advances which have been made abroad in the study of constitutional types, both physical and mental. Typology has lately become an active field of research in Germany.

The general literature of the subject is more extensive than that which relates specifically to the period of infancy and early

childhood. Dr. A. A. Roback has recently compiled a *Bibliography of Character and Personality* (Sci-Art Publishers, Cambridge, Mass., 1927) which embraces the historical development of the subject, and lists 3341 titles. The titles are listed alphabetically by author and are reclassified according to subject matter into 34 groups: anthropological, experimental, pedagogical, psychiatric, typological, etc.

The National Research Council (in Reprint and Circular Series No. 72) published a bibliography of over 1300 titles on *The Analysis and Measurement of Human Personality* up to 1926. When these titles are classified by time periods, it becomes evident that there has recently been a marked increase of investigation in this field. Four percent of the titles belong to the period up to 1900; 1.5 percent to the period 1901-1905; 5 percent to the period 1906-1910; 11.5 percent to 1911-1915; 22 percent to 1916-1920; 56 percent to 1921-1925.

In spite of the paucity of method for the measurement of emotional and social behavior, experimental studies in this field are becoming better defined. The nursery-school situation has made possible a large number of minor and observational studies. Progressive improvement of clinical and case history methods will further a clarification of the problems. These methods cannot be altogether abandoned in the complicated field of personality. They are needed as an aid to our mental hygiene policies with reference to both normal and exceptional preschool children.

5. Studies of Physical Growth

In a sense, the studies listed in Chapter VI are, on the surface, remotely removed from the domain of the psychology and education of the preschool child. Many of the studies are from medical sources, and some deal with such highly technical problems as "the phosphorus content of the body in relation to age, growth and food" and "the influence of adrenal cortex on body growth." The highly specialized character of such studies is recognized, but they are included as specimen indications of the vast structure of research in animal and human biology which is constantly shaping our concepts of the nature and needs of the child.

The problems of child development are rooted in the medical and biological sciences. The educational and social policies of the

future will be increasingly influenced by the physical and hygienic requirements of the child. The organization of preschool education cannot be adequately undertaken by a mere readaptation of the scholastic concepts of educational psychology to less mature age-levels. For these reasons, the researches in the field of physical growth have a practical, as well as scientific import.

Dr. Richard E. Scammon has made a quantitative summary of "the literature on the growth and physical development of the fetus, infant, and child."[5] He has compiled a notable bibliography of 5400 titles on this subject and estimates that the probable total number of separate papers, pamphlets, and books of a scientific nature is in the neighborhood of 7500 titles.

When the titles on bodily growth and physical development are distributed according to the dates of publication the following interesting chronology results:

Dates	*Total number of titles*	*Percent of total*
1500-1600	11	0.21
1600-1700	30	0.56
1700-1800	199	3.71
1800-1825	74	1.38
1825-1850	145	2.70
1850-1875	395	7.37
1875-1900	1759	32.80
1900-1925	2749	51.27

When the titles are listed with respect to subject matter, it appears that 30 percent of the total deal with general body growth; 14 percent with the skeleton and musculature; 7 percent with the nervous system. Forty-six percent of the publications are in the German language, 20 percent in French, 18 percent in English, 7 percent in Italian, 5 percent in Latin, with smaller percentages for the Slavonic, Scandinavian, Spanish, Dutch, and other languages.

These figures bring out in an impressive way the fact that the growth of science is international. America is making a distinctive contribution to the field of child development, but this contribution is by no means isolated from the vast network of scientific knowledge which began to evolve centuries ago. All the bibliographical statistics indicate that there has been a striking increase of research

[5] *The Anatomical Record,* Vol. 35, No. 3, May, 1927.

in psychobiological fields since 1900, and a special augmentation since 1920.

V. Outlook for the Future

The volume of scientific literature is becoming stupendous. The end is not in sight. It has been somewhat timorously suggested that this volume of science, increasing to a point beyond the power of individual integration, will smother us by its sheer mass. But there are forces of social selection at work which tend to bring the best truth to the surface, and to place this truth at the disposal of society. There is much current 'research' which is trivial, impermanent, and superfluous, but for this there will always be the corrective of more fundamental research. The social recognition of the needs of the preschool child will itself tend to sift out the best knowledge in this field and put a premium on basic investigation.

CHAPTER II

STUDIES OF MOTOR DEVELOPMENT

I. The Scope of Research on Motor Traits

Investigations of motor development have been an outgrowth of a number of interests, distinct in their origin, but involving a somewhat common goal. Ten such types of interest may be noted.

a. Biographical Studies of Infants. Motor functions which are the subject of attention in the daily régime of the nursery (suckling, reaching, sitting, walking, etc.) have been reported by simple observational methods. These studies have considerable suggestive value, but because of the small number and the selected nature of the cases, they will not be included in the present review.

b. Clinical Portraits of Reflex Activity. Physicians and others have responded to the practical need for methods of recognizing deviations in development. The grasping (suspension) reflex, the Babinski, and the suckling reflexes have been particularly noted for their supposed diagnostic importance. Birth trauma, premature birth, nutritional disturbances, and various pathological conditions in infancy have been studied, in a somewhat casual and incomplete fashion, in relation to their effects upon sensori-motor activity.

c. Studies of Maturation. The problem of sequence in development, and the factors involved in the serial appearance of reflex patterns, have been investigated by Coghill[1] and Carmichael in the amphibia, Avery in the guinea pig, and Tilney and Casamajor in young kittens. The techniques employed by these and other students of animal infancy cannot be duplicated in the case of the human child, but have furnished an incentive for a more careful description of prenatal and postnatal behavior. The reports of Minkowski on reactions in the human fetus provide an excellent starting point for this work.

[1] Lack of space has necessitated the omission of references to the work of the investigators mentioned on this and the immediately following pages. The omitted references are merely supplementary to the 55 annotated citations of literature that comprise the bulk of this chapter.—*Editor.*

d. The Integrative Functions of the Nervous System. Reports upon synergy, inhibition, prepotency among reflexes, etc. (see, among others, Sherrington, Brown, Forbes and Gregg, and Magnus and deKleyn) have suggested problems of great interest to the student of child development. These problems of reflex integration are of course closely related to the problems of serial order mentioned in the preceding section. In the new-born infant the genetic method offers a substitute and in some respects an equivalent for the experimental methods employed with animals.

e. The Conditioned Reflex. The experiments of the school of Pawlow have given us not merely a method which is applicable to children, but also a very provocative group of theories concerning the sensori-motor functions. The earlier studies of Krasnogorski and Mateer on conditioned motor traits are now being brought to a wider scope in a number of laboratories, particularly among the 'reflexologists' of eastern Europe.

f. Gestalt Theory. This theory has had more influence upon sensory psychology and the psychology of learning than upon inquiries into the motor functions *per se.* The doctrine of motor configurations, however, cannot be overlooked in our studies of development. The atomism of the conditioned-reflex school receives a very healthy corrective in a point of view which emphasizes the total situation and the response of the organism as a whole.

g. Laboratory Investigations of Motor Learning and Skill. Experiments with adults, in the classical psychological tradition, have furnished problems and techniques which to some degree are now being extended to preschool children. This is legitimate in the case of problems which logically require a genetic setting, but it is apt to be of little value when the study becomes merely an academic copy of prior work with older subjects. The most significant problems with preschool children are those which develop intrinsically from work in this field, rather than those which are transferred bodily from animal or human adult psychology.

h. Intelligence Testing. A further line of influence is derived from the intelligence-testing movement. In the development of preschool tests increasing emphasis is given to motor tests in the lower levels. This gives rise to research concerning the predictive significance of motor traits for general intelligence and the relationship between the various groups of motor abilities.

i. The Hygiene of Development. In its relation to problems of posture, muscle tonus, and general bodily coördination, the study of the hygiene of development has raised a number of problems which can only be solved coöperatively, by research workers in allied branches. These problems are as yet somewhat vaguely formulated, but no one can doubt the theoretical and practical importance of our first tentative studies in this field.

j. Research on Motor Traits. Finally, research on motor traits has been greatly promoted by the nursery-school movement. The emphasis upon training children in self-care has led to studies of the motor habits in washing, dressing, the use of tableware, etc., in order to determine the maturity levels at which certain habits can profitably be initiated.

An increasing number of recent studies fail to classify strictly in any of the above groups; they belong neither to psychology, to education, to physiology, nor to pediatrics. In method they tend to overlap several areas of inquiry, and the origin and nature of their problems suggest that they belong to a new confederation of sciences, which may be termed the "field of child development." This is now being recognized in our universities as a distinct field, and at certain of our centers has been given a status coördinate with the older departments of natural science. Even these older sciences are of course more or less synthetic in their occasion, and their boundary lines are unsettled and shifting.

II. The Definition of Motor Ability

The present review has omitted certain studies of the vocal functions, the overt expression of the emotions, and studies of motor learning, which may more properly be included in other sections of this Yearbook. Particularly in the case of young children, it is of course difficult to deal with any psychological processes save in terms of their motor expression. With children, however, as with adults, we retain the concept of 'motor' traits as contrasted with 'emotional' or 'intellectual' traits, and we conceive of 'motor' ability in contrast with the sensory, perceptual-discriminative, and verbal-analytic abilities or capacities. As a definition of motor ability, we may accept the one given by Garfiel, "that ability which can be described as strength, speed, accuracy, and adaptability of movement" (although the weighting to be assigned these various

factors has not been determined). Buford Johnson has classified the motor skills of two-year-olds under the headings: "maintenance of equilibrium, locomotion, manipulation, postural changes, expressive gestures, speech reactions."

Studies of motor ability among adults have not always succeeded in demonstrating a general common factor or a satisfactory degree of constancy in individual tests—Muscio, Perrin, Antipoff. From the consensus, however, of such investigations as those of Abelson, Bickersteth, Garfiel, and Reymert, we appear to be justified in concluding that motor traits occur in a positive relationship to each other, and that the common belief is justified in assuming some degree of a generalized motor aptitude. This tends to be borne out by studies in the preschool field, although as yet we have had no adequate analysis of this problem by more refined statistical methods. From an inspection of correlations, one is perhaps more impressed by the specificity of motor traits than by the fact of a common element.

The relationship of mental to motor ability has been reported as positive by Gesell, Woolley and Fischer, Kirkpatrick, Burt, and others. Where correlations are computed, these tend to average below .20, and in some cases close to zero—Perrin, Bickersteth, English. Tests of preschool children have sometimes shown much higher coefficients, but this may be due to the fact that with young children motor tests play a greater rôle in the measurement of general intelligence, and to the further fact that during a period of rapid growth the age factor is certain to be of prominent importance save where methods are employed to keep it constant. In such normative schedules as those prepared by Gesell, an attempt is made to distinguish motor development from language, adaptive, and personal-social development. In some of the other series of preschool tests this distinction is not preserved, and we have intelligence quotients determined to a large extent by tests of a type which, in the case of adults, produce intelligence quotients that correlate very poorly with mental ability. It is possible, of course, that motor coördination and precision of movement are more indicative of basic learning capacity in young children than in older subjects who tend to preserve individual differences in these functions along relatively automatized lines. This is a matter which deserves further inquiry. The whole question of

the validity of our preschool tests (of motor and of general ability) depends upon the collection of cumulative data on children who are followed by systematic retests from early childhood into adolescence.

III. The Present Program of Research

Among current (unpublished) studies on motor development, we find a wide variety of projects, listed under such titles as the following:

The measurement of gross activity during free play.
Rate, force, and accuracy of simple hand-eye coördinations.
Accuracy of movement under displeasing stimulation.
The relationship between the development of motor control and of emotional control.
Studies in the relation of body balance, eye balance, and spinal alignment.
Postural reflexes in normal and diseased condition among children and adults.
The frequency of postural scoliosis in young children.
The physiological mechanisms of the foot in relation to posture.
The correlation of obstetrical factors with the developmental history of the first year.
Locomotion in relation to nutritional status.
A cinematic study of early grasping and manipulatory behavior.
Racial differences in bimanual dexterity in children.
Muscular re-education.

While the titles themselves tell little about the nature of these studies, it is clear that our present research is not limited to a few narrow approaches. The scope is broad, and there is a healthy development of contacts with other fields of investigation. Perhaps the chief need at present does not lie in the definition of new areas of research, but rather in an improved organization of our resources. Many, perhaps most, of our studies are still to a large extent one-man affairs, handicapped by inferior laboratory technique and by the limitation to a grossly inadequate number of cases. In pre-doctorate research this condition is perhaps difficult to avoid, but the recent increase of child research centers should make it possible to carry on major projects in a broadly coöperative, rather than a competitive spirit. To the extent that this occurs, it would involve a pooling of problems and an allocation of special phases of work according to the facilities in different

centers. As an illustration of the present state of affairs, studies on preferential handedness in preschool children have been reported as actively under way at the state universities of California, Minnesota, and Wyoming, at Johns Hopkins, at Yale, and at the Cleveland School of Education. Since the problem and methods have been developed almost entirely independently, the investigators learn little about each other's work until publication has occurred. Some phases of this research are unnecessarily duplicated, while others are greatly in need of a wider data collection, by the use of identical methods in several centers. We have at present a number of very useful agencies devoted to the organization of research. The actual organization, however, is still highly individualistic; a survey of the enterprises in this field of motor development makes it very evident that, in the interests of economy of effort and of concentration of aim, more definite steps should be taken toward a unified program.

IV. Survey of Research Studies

1. Adie, W. J., and Critchley, M. "Forced grasping and groping." *Brain*, 50: 1927. (Part 2), 142-170.

Problem: To study neurological factors affecting the primitive manipulative activities.

Method: Clinical records and post-mortem examination of brain tumors (chiefly in adults).

Findings: The new-born infant first shows reflex grasping; later it begins to grope and reach for objects, but closes the hand only in response to contact. The development of control at higher physiological levels enables the child to pick up and transport objects and eventually to perform voluntary opening and closing movements of the hand. In certain cases of frontal lesion this control is released, and forced grasping and groping movements occur under the influence of lower centers.

2. Angelis, F de. "Reflexes of the new-born." *Amer. Jour. Dis. Child.*, 26: 1923, 211-215.

Problem: To determine the mode of action and the pathognomonic importance, if any, of the reflexes in the new-born.

Method: Eighty-eight new-born infants were examined during the first week of life under varying conditions—with the baby sleeping, waking, crying, resting, etc. All infants were constitutionally normal and in good health.

Findings: No relation was found between age, sex, weight, and the reflex phenomena, but in a general way "an inverse relation exists be-

tween the tendinous and cutaneous reflexes according to body weight; that is, the greater the weight and development of the baby, the more vigorous the cutaneous reflexes and the weaker the tendinous reflexes and *vice versa.*"

Cutaneous reflexes: Usual response of the plantar reflex is the plantar flexion of the toes, but movements are extremely variable.

Abdominal reflex: Elicited with difficulty, hardly perceptible in 77 percent.

Cremasteric reflex: Present in 92 percent.

Corneal and pharyngeal reflexes: Present and vigorous in all new-born infants.

Tendinous reflexes: Normal in 20.4 percent, exaggerated in 54.5 percent, much exaggerated in 21.6 percent, and absent in 3.5 percent. The criterion for exaggeration is not stated.

Pupillary reflexes: 17 percent have constricted pupils, relatively non-reactive; 20.5 percent show enlarged pupils, with slow movements; 62.5 percent react to a light stimulus by a series of alternating contractions and dilations.

"The great variability of reflexes in the new-born, whose modification and intensity vary widely, makes it impossible to attach to them the pathognomonic importance they have in the adult."

3. Andrus, R. *A Tentative Inventory of the Habits of Children From Two to Four Years of Age.* Publications of Teachers College, Columbia University, 1924. 50 pp.

Problem: See title.

Method: Diary records for 52 children were obtained by 67 members of a class in kindergarten-primary education. The diary records for each week (covering 3 to 5 hours) were scored according to a preliminary inventory and checked against the experimenter's scoring of the same records.

Findings: The revised inventory includes 112 motor traits, in addition to traits listed under the headings of social-moral, emotional, and mental. Sample items are: Does the child very often, sometimes, or never

1. Hold his spoon tightly grasped in fist?
8. Hold cup in one hand?
13. Fold his napkin?
41. Unbutton clothes?
82. Pour water from pitcher alone?
105. Use hammer to draw out nails?

Age norms for the various divisions of the inventory are not yet available.

4. Aoki, S. "Significance of first walking in child development." *Shinri Kenkyu (Psych. Studies),* 21, No. 1. (Abstracted by J. C. Yoshioka, *Psych. Abst.,* 1: 1927, 97.)

Problem: To determine factors influencing the age of beginning to walk.

Method: Physical measurements and mental tests of 53 school children, correlated with the age of first walking.

Findings: Precocity in walking correlates .53 with scholarship, .19 with mental tests (including tapping, memory, and cancellation), and approximately .00 with height and weight.

5. Baldwin, B. T., and Stecher, L. I. *The Psychology of the Preschool Child.* New York: D. Appleton, 1925. Ch. 4, pp. 74-105.

Problem: To study a variety of motor activities in children and to determine norms for performance.

Method: In the study of motor control the materials used were the Wallin peg-boards, the Goddard form-board, the mare and foal picture-board, the Montessori cylinders and towers, and a form cancellation test. In the study of motor coördination as relatively uncomplicated by form perception, the following six tests were employed: the Porteus maze, a three-hole test, a perforation test, the walking board, Montessori dressing frames, and a tracing path. The subjects were 105 children 2 to 6 years of age at the preschool laboratory of the University of Iowa. Results are given in averages for different age levels, which show increase, and in averages for successive trials, which show presence or absence of practice effect.

Findings: The tests all show a definite improvement in motor control and motor coördination at succeeding age-levels. The walking board, the Montessori cylinders and tower, and the mare and foal boards are too hard for two-year-olds, while some of the Montessori dressing frames are too easy beyond the age of 4 years. Varying degrees of practice effect were shown. With age constant, these tests correlate with the Stanford-Binet from .11 to .45. The Goddard, Porteus, three-hole, perforation, Montessori, and tracing tests show an average intercorrelation (age constant) of only .12.

6. Blackhurst, D. J. "The value of play apparatus for developing motor control in preschool children." Unpublished master's thesis, Univ. of Iowa, 1927. 77 pp.

Problem: To compare growth in motor coördination in two groups of children playing under (*a*) ordinary home conditions and (*b*) with the special play equipment of a nursery school.

Method: Thirty-eight children were tested with a series of walking boards graded in width, a strength test for arm pull, a target-board test, and the Wellman tracing-path test. Eleven of these children, in a nursery school, had free access to a slide, swings and trapeze, ladders, play boxes and Kiddy Kars. The remaining group of 27 children, used as a control, had no opportunities for play of this character. A motor

retest for both the experimental and the control children was given at the end of two months.

Findings: The experimental group showed a tendency to make more uniform and consistent gain in all the four motor tests than the control children who lacked access to the play apparatus. In view of the small number of cases, the short period of growth between the testings, and the possible non-equivalence of the groups, the study may be regarded as of a preliminary nature.

7. Blanton, Margaret C. "The behavior of the human infant during the first thirty days of life." *Psych. Rev.*, 24: 1917, 456-483.

Problem: To study the behavior of new-born infants in regard to first appearance of reflex activities and motor coördinations.

Method: A large number of infants were observed in the Johns Hopkins hospital, at birth, and in the nursery thereafter during their stay at the hospital.

Findings: During the first twenty minutes of life the following reactions were observed: sneezing, yawning, tears, sucking at nipple, fixating on light, putting thumb in mouth, jumping to loud sounds, grasping, crying with box-shaped mouth, crying with the corners of the mouth depressed, following a moving hand with eyes, turning head when prone, turning over when given slight help, complete erection of penis and a cry of 'anger' immediately after birth. Some of these were exceptional reactions. Inability to suckle was associated with other deficiencies in the child and with low intelligence in parents.

8. Brainard, P. P. "Some observations of infant learning and instincts." *Ped. Sem.*, 34: 1927, 231-254.

Problem: To determine the extent to which so-called instinctive activities are dependent on learning; the eye-hand coördination, walking, talking, and laughing are considered as examples.

Method: Observation of the author's daughter during first year.

Findings: (1) Eye-hand coördination appears in second month. No new movements appear, but muscle tonus increases and certain movements are eliminated. (2) Tremendous practice is involved in walking. The author considers that it is hardly justifiable to call walking instinctive, as the primary responses are so highly modified. (3) Only the simplest form of accidental vocalization can be called instinctive. Even social approval, as a stimulus to the selection and stamping in of certain accidental vocal reactions, does not function as a result of the child's instinctive equipment.

9. Bridges, K. M. B. "Occupational interests of three-year-old children." *Ped. Sem.*, 34: 1927, 415-423.

Problem: What Montessori apparatus, toys, and domestic equipment is preferred by three-year-old children?

Method: Tabulated record kept for several weeks of occupations of six boys and four girls, whose ages ranged from 2 years, 6 months, to 3 years, 8 months, during one hour's free play period per day in nursery school.

Findings: Montessori cylinders, color matching, and building with large blocks are preferred. A slight sex difference appears in that boys prefer larger muscular movements and inventive play, while girls prefer finer muscular movements and routine play. Average duration of interest in single occupation was 8 minutes. Longest duration of interest was one-half to one hour.

10. Bryan, E. S. *Important Conditions Found in the New-Born, with Consideration of Their Psychological Significance.* Ph.D. dissertation, Johns Hopkins Univ., 1927.

Problem: "The consideration of those factors present at birth and in the earliest days of the new-born infant's life which may lend their influence to the determination of his reactions and behavior."

Method: One hundred infants were observed during birth and twice a day (waking and sleeping) for the first ten days of life. Special note was made of (1) the cry, (2) sensory acuity, (3) reflexes, (4) muscular activity, and (5) the emotions.

Findings: (1) The cry is usually, but not always, among the first activities of the infant after birth. (2) Visual, auditory, gustatory, and olfactory stimuli must be very intense to elicit a response from the new-born infant. (3) The Babinski reflex is usually present by the tenth day, except in the negro children studied. There is a wide range of difference in ability to suckle. (4) The grasping reflex is strong enough in some infants to support the entire weight. "Strength and ability have a tendency to increase with the age of the infant. The movements preparatory to lifting the head appear similar in all infants and rather definitely purposeful and not just random. Creeping is possible even in this very early period, as is also the power to support the body weight on the feet."

11. Buckley, A. C. "Observations concerning primitive reflexes as revealed in reactions in abnormal mental states." *Brain,* 50: 1927, 573-578.

Problem: Study of behavior disorders in abnormal mental states, in which were revealed striking similarities to reactions occurring in the embryo, in infancy, and in early childhood, especially with respect to the emphasis and dominance of primitive reflexes.

Method: Brief reports of investigations on the reflex responses of human foetuses of varying ages. Some illustrative examples are given of primitive reflexes in patients with cerebral degenerative processes.

Findings: In case of terminal general paralysis and advanced arteriosclerotic dementias, swallowing and sucking reflexes were found

preserved. Grasping reflex returned in all cases of organic dementia examined. The primitive dominance of flexor reflex responses is striking in states of mental depression (foetal posture). The author believes that "the total absorption of the patient's attention (consciously or unconsciously) by persistent emotional states (usually painful in depressions) excludes the influence of inhibitory excitants and thus allows the dominance of primitive reflexes." In states of mental excitement or exaltation a dominance of extensor response appears. Schizophrenics show a great variety of primitive reflex behavior, such as "hand to mouth reflex universally present in infancy and in low-grade imbecility." "Reflexes appearing earliest in the order of functional development are apt to be the last to disappear....in functional disintegration. In a similar manner the last to be acquired are likely to disappear early in the course of dementia. When inhibitory influences are removed as a result of functional disintegration, primitive reflexes control the types of response to such an extent as to make them stand out conspicuously."

12. Burnside, Lenoir H. "Coördination in the locomotion of infants." *Gen Psychol. Monog.*, 2: 1927, 284-372.

Problem: To study "the coördination of limbs and body postures and the sequence of movements involved in the development of human progression, more particularly in those stages of progression which precede walking."

Method: Motion pictures were taken of the child during progressive movements. Nine children, aged 6 months, 21 days, to 17 months, 29 days, on the first observation, and one adult were studied. Seven of the children were observed at successive ages from two to seven times.

Findings: In crawling, the abdomen is in contact with the supporting surface, while the body is pulled along by the arms, the legs dragging. Many asymmetrical movements are made. Later the arms begin alternate action and the legs come into use. Both legs may be used simultaneously, or nearly so, or only one leg may aid in progression, the other dragging. Hitching, rolling, or some other crude form of locomotion may occur as the first mode of progression. In creeping, the posture is changed to hands and knees, with the trunk carried free above the floor. Cross coördination of limbs begins to appear at this time. The movements are frequently arhythmic. Still later, the diagonal limbs move together for part of the time of the movement. In some cases diagonal synchronism of movement develops, but this holds only partly true. In walking, the posture is erect, with weight borne on the two feet; there is rhythmic alternation of the two lower limbs as each in turn becomes the supporting limb. The head is carried sufficiently erect to enable the child to survey the field before him. There is an increase in harmonious coördination and rapidity of movement with increase in age. Length of step increases, whereas width and variability decrease with age. The young child commonly turns the toes outward in walk-

ing. Each child will vary in the combination of details of the successive stages of progression. There is no evidence that a child may go from a sitting posture to walking without intervening types of locomotion.

(This is the most significant piece of work on the development of walking since that done by A. W. Trettien, "Creeping and walking," *Amer. Jour. Psychol.*, 12: 1900, 1-57.)

13. Burr, C. W. "The reflexes in early infancy." *Am. Jour. Dis. of Children*, 21: 1921, 529-533.

Problem: To study the order of appearance of certain reflexes in early infancy.

Method: Examination of 69 infants in Philadelphia maternity hospitals, including 27 of negro blood.

Findings: The deep and superficial reflexes (*e.g.*, knee, Achilles, chin, plantar, abdominal) may be present at birth; the absence of some or all in early infancy, or an unequal development of the reflexes on the two sides of the body, indicates a pathological condition. The plantar reflex is extremely variable as to the muscle pattern, the speed of movement, and the time of appearance. The knee jerk was present in 61 out of 66 cases; the only absences occurred during the first four days. The Achilles tendon reflex is frequently absent at birth; its normal date of appearance is undetermined. No race differences were observed in reflex characteristics.

14. Cowan, Edwina Abbott. "Results of motor reconditioning methods used in training a backward child." *Ped. Sem.*, 35: 1928, 98-104.

Problem: To note the relationship between motor and mental development in one retarded eight-year-old girl.

Method: The child was given training in motor activities, as dancing, swimming, walking blindfold, bicycle riding, etc., in the afternoons, while in the mornings training was given in mental activities, such as addition, writing sentences, and carrying out directions.

Findings: Mental progress accompanied progress in muscular coordination. Self-confidence was gained, and with it many fears (of doing certain things) were overcome. The author concludes that owing to a prolonged illness in infancy the child had not automatized motor activities as does the normal infant. Because of this she was required to attend to them to such an extent that her attention was not free to be engaged in higher mental learning. The automatization of these through special training made mental development possible.

15. Cunningham, B. V. "An experiment in measuring gross motor development of infants and young children." *Jour. Ed. Psych.*, 18: 1927, 458-464.

Problem: The measurement of gross motor coördination considered as distinct from general intelligence and general body development.

Method: Observation of 100 children, from 12 to 42 months, in situations designed to stimulate motor activity. A total of 42 situations was devised for the different age levels, of which the following are samples: *12 Months Level:* To remove a paper cap from head, to remove a hoop from knees, to obtain a toy from the second step. *18 Months:* To get off a box 6 inches high, to climb over a long obstacle (board). *24 Months:* To throw a bean bag into a twelve-inch hole after practice, to roll a bowling ball nine feet and over a small obstacle. *30 Months:* To throw a bean bag into a hole at three feet, to walk up an 8-foot flexible plank elevated eight inches at upper end, to walk between two parallel lines painted on floor. *36 Months:* To walk up steps without support, to jump with two feet from 8-inch elevation, to start to run within two seconds of signal. *Tests too difficult at 36 months:* To jump with two feet over hurdle 3½ inches high, to hop on one foot.

Findings: A preliminary analysis of results indicates a positive relation between the motor tests and the Kuhlmann Binet at the different age levels (correlations ranging from .39 to .65). Correlations of gross motor scores with the weight-height ratio and the weight-stem ratio were also positive, suggesting a possible relation between body build and motor skill. Correlations between motor skill scores at 12 months and at 18 months suggest a satisfactory reliability of the motor test.

16. Denisova, M. P., and Figurin, N. L. ("Periodic phenomena in the sleep of children.") Novoe v refleksologii i fiziologii nervnoi sistemy (Reflexological and Neurophysiological News), 2: 1926, 338-345. (Abstracted by A. L. Shnirman in *Psych. Abstracts,* 2: 1928, 117.)

Problem: To determine possible variations in the rate and depth of breathing during sleep in relation to other motor changes.

Method: By means of the Lehmann pneumograph the curve of breathing was registered for some (3-5) hours. Detailed records of overt activity were also kept.

Findings: Breathing of infants during sleep is alternately accelerated and retarded, a regular periodicity being shown. Simultaneously with the acceleration there begins also a deeper breathing. The periods of acceleration and retardation may alternate in perfect rhythm; the average duration of a cycle is about 50 minutes, but varies with the individual and with age. The period of accelerated breathing is accompanied by motor phenomena as follows: movements of the eyelids and the pupils under the lids, (often, but not always) general movements of the head and hands and turning of the body, expressive movements and smiling; urination also occurs only at this period. Pulse was alternately accelerated and retarded, parallel with the breathing.

17. Downey, June E. "Dextrality types and the preschool child." Twenty-seventh Yearbook of this Society. Part II, 1928, 153-158.

Problem: To determine the types of dextrality and of eyedness which occur in preschool children and the relation of dextrality types and eyedness to failure in Stanford Binet test VI-I (discrimination of right and left).

Method: (1) Forty-nine preschool children were given motor tests to determine dextrality types. (2) Eyedness was determined by the methods of unilateral eye-closure and eye-opening, and by sighting. (3) Failure in Binet VI-I was correlated with eyedness and handedness in 79 school and preschool children.

Findings: (1) Preschool children show the same dextrality types as adults, except that a larger proportion of unstable reactions occur. In opposition to Watson, the evidence leads the author to believe that dextrality types are hereditary and not acquired. (2) The results for eyedness are somewhat inconclusive, owing to difficulty of procedure, but there are indications that left-eyed boys are more numerous than girls, and that children are left-eyed in a greater proportion than adults. (3) Children whose dextrality type and eyedness do not correspond (*i.e.*, who are right-handed and left-eyed, or the reverse) seem to fail test VI-I oftener than those whose dextrality type and eyedness are similar. Coaching children in the test yielded suggestive, but inconclusive results; the right-handed and right-eyed children apparently had the advantage.

18. Duffy, E. *Tensions and Emotional Factors in Reaction.* Ph.D. dissertation, Johns Hopkins University. 1928.

Problem: (1) To examine the relation between muscular tension and emotional excitation, (2) to secure a measure of characteristic individual differences in tension, and (3) to relate these differences in tension to differences in other types of reaction in the individual.

Method: The experimental procedure was planned for the measurement of the degree of tension in the left or unused hand during a performance that required discriminatory reactions to be made by the right hand. At specified intervals emotional stimuli were introduced. Kymographic records were obtained that show the time of appearance of visual stimulus, the reaction made by right hand, the time of emotional stimulation, and the degree of tension in left hand throughout the performance. Rating scale estimates of the tendency toward excitability furnished additional data with which to correlate findings. The subjects were children ranging in age from three years, five months, to five years, one month.

Findings: Individual children vary characteristically in tension of the unused hand during a performance that involves discrimination. The

height and form of the pressure curve are held to reveal these characteristics. The type of tension line seems correlated with tendencies in emotional reactions as indicated by changes in the line when specific emotional stimuli are introduced. The experimental data present no evidence of a definite relationship between the height or type of tension curve and efficiency in performance or variability in performance. Inefficiency of performance was associated with a high average tension score and an irregular tension line, but the causal factor was not determined.

19. Feldman, W. M. "The nature of the plantar reflex in early life and the causes of its variations." *Brit. Jour. Child. Dis.*, 18: 1921, 24-27.

Problem: See title.

Method: Examination of 500 normal children from birth to the age of seven years.

Findings: Premature infants respond chiefly with dorsiflexion (the Babinski reflex) for four to six weeks after birth. Bilateral dorsiflexion is at all ages more common in girls than in boys, and is stated by the author to be slightly more common in dolicocephalic than in brachycephalic infants. The inconstancy of the response in infants may be due to easy fatigability, and a rapid rate of recovery from fatigue of the muscles. The appearance of the plantar reflex (in substitution for the Babinski) was found to be unrelated to the incidence of walking.

20. Fleischmann, P. "The defense reflexes and their significance." *Arch. f. Psychiat.*, 80: 1927, 377.

Problem: To determine the pattern and the neural mechanism of the defense reflexes.

Method: Friction or pain stimuli were applied to the leg in 57 cases of brain or cord pathology.

Findings: In a defense reflex an involuntary sharp flexion occurs, followed by a slow return to the previous position. It is usually accompanied by an extension of the toes, characteristic of the Babinski reflex. In adults this movement pattern occurs only in cases of pyramidal involvement, with blocking of voluntary control.

21. Gates, A. I., and Taylor, G. A. "The acquisition of motor control in writing by preschool children." *Teachers College Record*, 24: 1927, 459-468.

Problem: To describe the learning process in writing and to determine the transfer value of practice under the 'mechanical aid' system.

Method: Thirty-five children of the Horace Mann kindergarten were divided into two groups and given practice in writing in 5-minute periods covering a year's time. Twenty-one children practiced by tracing letters over thin paper, with subsequent tests of copying the same

letters, and with tests of the transfer effects to other letters. The remaining fourteen children were trained in copying without tracing. An objective scoring method was devised, based on the quantity and quality of the product.

Findings: Fairly characteristic learning curves were obtained, showing negative acceleration. Improvement in tracing *a b c d e* was accompanied by about half as much improvement in tracing *f g h i j*. Improvement in copying shows less transfer effect, and the transfer from tracing to copying is very slight. Quoting from *Psychology for Students of Education,* by the senior author: "You learn precisely what you practice, and in being put through the acts of writing you learn, not to write, but to be put through movements that are something like writing movements."

22. Gesell, A. *Mental Growth of the Preschool Child.* New York: Macmillan, 1925. (Ch. XXVII, pp. 299-318, "Developmental correspondence in twins.")

Problem: To demonstrate similarities and differences in development of identical and fraternal twins.

Method: A detailed comparison of two pairs of monozygotic twins and, in less detail, a comparison of dizygotic twins.

Findings: The monozygotic twins were almost identical in their motor developmental characters, as indicated for twins A and B, age 9 (superior), in strength of grip, tapping rate, and steadiness; and for twins X and Y, age 6 (defective), in posture and a very unusual spastic gait, also in coördination as evidenced in their drawings. M and F, dizygotic twins, show only ordinary fraternal resemblance, with F definitely inferior to M in motor development.

23. Gesell, A. *Infancy and Human Growth.* New York: Macmillan, 1928. (Ch. XIV, pp. 272-298, "Twinning and growth regulation.")

Problem: To note some special aspects of twinning in relation to development.

Method: Investigation of two cases of hemihypertrophy and one pair of monozygotic twins.

Findings: Hemihypertrophy is an atypical form of twinning. In both cases studied, it is associated with mental deficiency. Difficulty in walking in one case was apparently due to disparity in leg length. In the other case dynamometric measurements are reported and show the larger hand to have a much stronger grip than the smaller.

Identical twins may differ considerably in weight and motor strength in early infancy, but show greater correspondence in other developmental items.

24. Gesell, A. *Infancy and Human Growth.* New York: Macmillan, 1928. (Ch. XVI, pp. 334-354, "The preëminence of human infancy.")

Problem: To note the distinctive characters of human, as compared with infrahuman infancy.

Method: The results of studies of the time of appearance of motor coördination and activities of various insects, birds, and primates are compared with Gesell's norms for human infants.

Findings: In general, with shorter periods of infancy the motor coördinations are more precocious, but reach maturity at a lower level. In certain motor coördinations, such as crying, sneezing, suckling, winking, response to sound, visual fixation, eye-hand coördination, crawling, walking, palmar prehension, opposing thumb, vocalizing, etc., infrahuman infants are very precocious as compared to human. A table comparing the ontogenetic ages of similar developmental items in *Macacus rhesus* and in man illustrates this. In more complex adaptive behavior, however, the human is eventually far superior at the end of a longer period of infancy.

25. Gesell, A. *Infancy and Human Growth.* New York: Macmillan, 1928. (Part II, pp. 136-333, "Genetic studies of infant behavior.")

Problem: To study developmental processes in regard to (1) the tempo and trend of infant development, (2) normal and retarded development, (3) acceleration and superiority of equipment, (4) atypical and pseudo-atypical growth complexes, (5) children's drawings as a developmental index, (6) the tendency toward an optimum in growth, (7) glandular and nutritional factors in mental growth, (8) twinning and growth regulation (abstracted elsewhere), and (9) the mental growth of the premature infant.

Method: A study of the developmental norms and their application to particular situations.

Findings: The logarithmic graph, which indicates the negative acceleration of maturity, is the better indication of the trend of development. Comparisons of normal, retarded, and accelerated development show consistent developmental trends on different levels. Mental growth is not necessarily retarded by extreme motor disabilities. "Drawing tests reveal retardation in subnormal infants more commonly than they reveal a corresponding acceleration in superior infants." Motor retardation occurs in company with mental in Mongolism and thyroid deficiency. In puberty praecox the motor development is far in advance of the mental. Rickets cause some temporary retardation. Apparent retardation of the premature infant disappears when age is calculated in post-conception months instead of post-natal.

26. Gesell, A. *Infancy and Human Growth.* New York: Macmillan, 1928. (Chs. IV, V, and VI, pp. 81-135, "The comparative method in observation.")

Problem: To show importance of comparative observation of infant activities at successive stages of development.

Method: Comparisons are made of two normal infants, one month apart in chronological age, by presenting the same stimuli to the two infants simultaneously and noting the differences in maturity of motor coördination.

Findings: The comparative method emphasizes the great increment in postural development, precision of grasping and prehension, eye-hand coördination, etc., as the child grows older. On the basis of these studies a normative developmcnt schedule for each month is given through 10 months, then for 12, 15, 18, 21, 24, and 30 months. The norms for the later ages are spaced further apart because of slower increment.

27. Gesell, A. *Mental Growth of the Preschool Child.* New York: Macmillan, 1925. (Ch. VII, pp. 68-88, "Norms of motor development.")

Problem: To present a standardized method of examining the motor development of children from 4 months to 5 years of age, and a standard of normal developmcntal levels for comparison.

Method: Each test situation is described and evaluated. They are classed under (1) Postural control, (2) Locomotion, (3) Prehension, and (4) Drawing.

Findings: Four-month level: The infant resists head pressure, holds head erect, lifts head in prone position, tries to sit up, crawls, rolls from side to back, pushes with fcet, clasps cube, resists rod withdrawal, puts hand to mouth, and kicks and splashes in bath; thumb opposition is partial; the hands react to sight of table top, and the back shows postural resistance. *Six-month level:* Holds head erect, sits with slight support, rolls back to stomach; hands react to table, picks up cube, holds two cubes, splashes in tub. *Nine-month level:* Sits alone, makes stepping movements, stands with help, walks with help, hitches or creeps, holds two cubes, drops one cube for a third, inhibits hand to mouth, manipulates with one hand, releases cube in cup (imitation), scribbles imitatively, secures pellet. *Twelve-month level:* Stands (with help), makes stepping movements, walks (with help), can creep, can climb, takes third cube in addition to two already in the hand, inhibits hands to mouth, scribbles spontaneously, climbs stairs, acccpts fourth cube, secures pellet with fine prehension. *Eighteen-month level:* Walks alone, climbs stairs, accepts fourth cube, scribbles spontancously, imitates stroke, throws ball in box. *Two-year level:* Puts shot in bottle at command, imitates vertical line, can copy circle. *Three-year level:* Copies circle, copies cross, imitates vertical line, horizontal line, traces diamond, aligns card. *Four-*

year level: Passes fish test, drawing circle, cross, traces diamond. *Five-year level:* Passes fish test, copies square, triangle, diagonal, hexagon, traces cross with coördination.

28. Goodenough, Florence L., and Brian, Clara R. "The study of certain factors underlying the acquisition of motor skill by children of preschool age." (Unpublished) Institute of Child Welfare, University of Minnesota.

Problem: To determine, by means of certain motor tests conducted over a period of time, degrees of skill displayed by preschool children.

Method: For each child a series of 20 trials daily for 50 days in throwing rings over a post. Daily records kept showing the number and serial order of successful throws, types of errors, and other significant facts relative to the comments and actions of the children.

Findings: There was improvement in skill in the course of daily practice periods. "There were 13.6 percent more successes during the last five of the twenty trials than during the first five." Success tended to cause the child to throw over the mark in cases of errors immediately following. Factors influencing success involved those of emotion (over-self-confidence or undue caution, the formation of undesirable motor procedure resulting in deterioration of performance with repetition of error, false association of cause and effect, the child's peculiar association of meaning attached to verbal expressions (*e.g.,* "trying hard" meaning "throwing with great violence"—"being careful" meaning "being gentle"), incorrect focus of attention (regarding arm or hand rather than goal), frequent change of procedure, thereby losing or not acquiring control of any one motor pattern. The greatest efficiency seemed to be gained by appropriate interruption of practice at times when the setting up of errors caused retardation of progress. The reliability of the score made on a single day was found to be approximately .50. The reliability of the score on a ten-day segment of the curve averaged approximately .90.

29. Heinlein, C. P. *Rhythmic Responses of Children During Musical Stimulation.* (Research under auspices of the National Research Council, 1927-1928.)

Problem: To determine the relation between musical rhythms and the temporal sequence of walking and marching movements of children.

Method: Subjective judgments of rhythm are eliminated by means of an electro-mechanical device for recording a child's movements kymographically. A Duo-Art reproducing piano in electrical connection with the kymograph affords an exact record of the stimulus pattern.

Findings: To be published later.

30. Heinlein, J. H. *A Study of Preferential Handedness.* (Ph.D. dissertation, Johns Hopkins Univ., 1928.)

Problem: To ascertain the use of the preferred and non-preferred hand in different motor activities and under various conditions.

Method: (1) With 25 children, ranging in age from 28 to 60 months, a series of 10 observations of 10 minutes each was made daily, in activities of an uncontrolled type. (2) Similar observations were made in experimental situations which provided equal opportunity for the use of either hand. (3) Situations were imposed which involved an obstacle to be overcome by the preferred hand. (4) Rate and efficiency of learning by the non-preferred hand were studied, with a test of transfer effects to the preferred hand. (5) Situations were imposed involving rapid and spontaneous choice of hand preference. (6) A series of manuscopic tests was used in order to determine their validity as tests of 'native' handedness. (7) A training method was developed, for practicing left-handed children in the use of the right hand in motor activities involving gross and minute motor coördinations.

Findings: To be published later.

31. Hrdlicka, A. "Quadruped progression in the human child." *Amer. Jour. Anthropol.,* 10: 1927, No. 2.

Problem: Study of the locomotion in the human child with special reference to the phenomenon of running 'on all fours.'

Method: Observation, chiefly casual and anecdotal.

Findings: Observations were of small children who, beginning at the age of about ten months, and for a variable length of time, manifested the peculiarity of running on all fours. Reports are given of six cases in various groups of children progressing naturally and spontaneously in this plantigrade fashion. The author regards this phenomenon as evidence of a usually dormant atavistic factor in development. An additional group of five cases is reported in a subsequent article.

32. Hulson, E. L. *A Preliminary Study of the Tempos Used by Preschool Children in the Three Rhythms: Walking, Running, and Skipping.* (Univ. of Iowa, unpublished thesis.)

Problem: To determine the tempos at which children from four to five years of age are best able to walk, run, and skip in concert with music played on the piano.

Method: The experiment was carried out under group conditions. One experimenter played the piano according to metronome tempo, while another observed the children and recorded. The children sat in a circle on the floor and were allowed to talk quietly to each other. Four children were called from the group at a time and observed for their natural rate without music. Eight consecutive steps in time to the music were taken as the criterion of successful performance.

Findings: The data are evaluated from the standpoint of the distribution of numbers of children who were successful at the various tempos.

33. Johnson, B. J. *Mental Growth of Children in Relation to the Rate of Growth in Bodily Development.* New York: Dutton, 1924. (Ch. 3, pp. 40-78, "Growth in muscular control.")

Problem: To study the relation of muscular control to chronological age, the weight-height index, practice, and sex.

Method: Five aspects of muscular control were tested: (1) strength of grip, (2) rate of coördinated movement, (3) steadiness of motor control, (4) precision of movement (target test), and (5) motor coordination in rhythmical tracing. The experimental group varied between 200 and 300 cases, with an age range of from 3½ to 13 years.

Findings: (1) Strength of grip increases with chronological age, and with an increase in the weight-height ratio. Right-handedness increases markedly with age. Boys, in this function, are consistently superior to girls, at all of the ages tested. (2) Tapping rate increases definitely with age and slightly with the weight-height ratio. The girls are in general superior to boys in rate of coördinated movement, but are less accurate in performance. The test shows a marked practice effect. (3) Steadiness is more significantly influenced by practice than by age. (4) The target test for precision of movement shows an average improvement with age, but the variabilities are high. (5) The test for motor coördination in rhythmical tracing indicates the presence of an age factor not due to practice. A simple form of the tracing test shows a satisfactory age differentiation up to seven years.

34. Johnson, B., and Schriefer, L. "A comparison of mental age scores obtained by performance tests and the Stanford Revision of the Binet-Simon scale." *Jour. Ed. Psych.*, 13: 1922, 408-417.

Problem: To study the relationship between a series of non-verbal (psychomotor) tests and the Stanford-Binet.

Method: Eighty-six children 3 to 9 years of age were tested with the Stanford Revision and (at the appropriate ages) with the Witmer cylinders, Rossolimo pictures, the Dearborn formboard, and a series of formboards from the Pintner-Paterson series.

Findings: The correlations between individual performance tests and Stanford-Binet average about .5 (chronological age not partialled out.) The performance tests show a poorer age differentiation than the Stanford-Binet, and the scale as a whole correlates better with the Stanford than with chronological age. For the prediction of Stanford mental age, the Rossolimo series of graded pictures is the best single performance test.

35. Jones, H. E. "A quantitative method for studying the development of handedness." (Unpublished) Institute of Child Welfare, Univ. of California.

Problem: To study the comparative use of the right and left hand in tasks covering a variety of discriminative motor adjustments.

Method: The Wallin peg-board, the Seguin form-board, the pink tower, color sorting, and the Whitman peg-board, were administered to 60 nursery-school children in Berkeley, ranging from 18 to 60 months in age. A concealed observer manipulated keys which gave a kymograph record of incidence and duration in the use of each of the two hands. The results were calculated in terms of dextrality ratios, dividing the time during which the right hand was used, by the sum of the times for the right and left hands.

Findings: The dextality ratios ranged in individual cases from .2 to 1.0, with averages at from .6 to .7 in various age-levels. The right-hand predominance showed no significant relationships to age, sex, or manual efficiency. In spite of divergencies in the nature of the tasks, the ratios for the various tests were closely similar. Although such tests as the Seguin would appear to invite bimanual activity, few of the children attempted to work bimanually to any extent; for the entire group, the two hands were used together less than 8 percent of the time. The reliability of the ratios was found to be .85.

36. Jones, M. C. "The development of early behavior patterns in young children." *Ped. Sem and Jour. of Gen. Psych.*, 33: 1926, 537-585.

Problem: To determine age norms and the period of development for a group of motor traits in infancy.

Method: Three hundred and sixty-five infants were examined, under standard test conditions, in well baby clinics of New York City. Three groups were included: a representative middle class white group, Harlem Negroes, and Italians.

Findings: (1) Smiling to a visual stimulus, blinking to a visual stimulus, and horizontal, vertical, and circular eye coördination yield percentile curves of a similar form, attaining the median at from 58 to 78 days; these 5 functions are present in nearly all children before 100 days. (2) Thumb opposition and eye-hand coördination (reaching) have nearly identical curves, beginning at 80 days, reaching the median at five months and the 100 percentile at nearly nine. (3) Sitting is more delayed, with a curve which indicates a negative skew in the distribution of this function; the median falls at seven months. Data of a less systematic nature were also obtained for the Babinski reflex and postural reflexes. (4) In the test of facial exyression (smiling to a visual stimulus) slight differences were found in favor of the boys, and in favor of the negro group. In eye-hand coördination, girls were more precocious than boys. No other sex or race differences were found.

(5) Results in a series of case studies suggest that early development in one trait is likely to be accompanied by early development in others, and that there is a positive relationship between precocity in these functions and general intelligence.

37. Lippman, H. S. "Certain behavior responses in early infancy." *Ped. Sem.*, 34: 1927, 424-440.

Problem: To study age of appearance of acceptance of an object, a second object, and a third object, and other early reactions.

Method: There were 384 observations of 178 infants from 4 to 18 months of age, including 84 girls and 93 boys.

Findings: Norms for accepting first object, second object, and third object, with notes on method used by child, and curves and tables of results. Records were also taken for the preferred hand in accepting the first object and for the development of the ability to hold the head erect.

38. Minkowski, M. "Sur les mouvements, les réflexes, les réactions musculaires du foetus humain de 2 à 5 mois et leurs relations avec le système nerveux foetal." *Revue Neurol.*, 37: 1921, 1105-1235.

Problem: To study the motor activity of two to five month old foetuses.

Method: In 17 cases of illness in pregnant mothers, foetuses from 2 to 5 months of age were removed by Caesarian section and immersed in a saline bath, which was maintained at slightly above body temperature. Observations were made of the responses to a standard schedule of stimuli.

Findings: Specific reflex responses can be obtained by touching the eyelid, touching the lower lip, or by striking the patellar tendon. Non-specific and irradiating reflexes can be obtained by lightly brushing the skin of the limbs or trunk, or by shifting the orientation of the body. Random movements of head rotation and arm-leg flexion and extension occur for a few minutes after the foetus is placed in the bath, but may be inhibited by local contact stimuli.

39. Myers, G. C. "Infants' inhibitions, a genetic study." *Ped. Sem.*, 29: 1922, 288-301.

Problem: To discover the time and manner of the appearance of inhibitions of motor acts and to study the development of walking.

Method: Diary study of two children from birth to 872 days.

Findings: Inhibition is caused by "supplanting of one sort of activity by another." The author discusses the rôle of inhibition in social control. "Walking is a kind of gradual evolution from the first day of the child's life." The child only seems to be taught to walk. His efforts and ultimate success are not primarily a matter of habit formation, but may be regarded as "symptoms of a waxing instinct."

40. Peiper, A., and Isbert, H. "The posture of infants." *Jahrb. f. Kinderh.*, 115: 1927, 142-176.

Problem: To study the reflex elements in the posture of infants.

Method: Seventy-eight normal infants and a small group of prematures and neurological cases were tested for (1) compensatory adjustment to sidewise or upward tilting of head, (2) adjustments to ventral bending of the head (Brundinsky reflex, drawing up of knees to abdomen), (3) responses to holding the infant head downward or head erect, (4) responses to moving or turning the pelvis, (5) the tonic hand reflex (clasping), (6) the neck reflexes to a strong light shone in the eye (head thrown backward), and (7) the spine reflex (contraction of the back muscles on the side of stimulation).

Findings: The spontaneous movements and posture of the newborn are regulated by reflexes. A complicated reflex system assists in acquiring new statical functions, until it is made superfluous and becomes inhibited by the cerebrum. Data are given for the appearance and lapsing of a number of reflex functions.

41. Popper, E. "Studien ueber saugphanomene. *Archiv. f. Psychiatrie u. Nervenkr.*, 63: 1921, 231-246.

Problem: To study the nursing behavior initiated by contact stimulation on the cheeks and lips.

Method: Responses were observed in 70 well infants, ranging in age from ½ hour to 10 days.

Findings: A touch on the lips initiates sucking movements; in a few cases the head turns toward the side of the touch. Touching the cheek produces a general restlessness which soon differentiates into opening of the mouth and snapping movements of the jaws, usually with a definite turning of the head.

42. Reymert, Martin L. "Questionnaire for the observation of a young child from birth to two years of age." *Ped. Sem.*, 27: 1920, 200-204.

An inventory which includes a wide variety of motor traits, some to be observed directly and some to be tested under experimental conditions. Motor acts covered include ocular, postural, reflex, and language development, motor expressions of emotions, motor skill in play, and motor imitation.

43. Schaltenbrand, G. "Normale Bewegungs und Lagereaktionen bei Kindern." *Deutsche Zeitschrift f. Nervenh.*, 87: 1925, 23-58.

Problem: To study the development of reflexes in young children.

Method: One hundred and twenty infants and convalescent children were systematically examined, employing the schedule of reflexes worked out by Magnus in studies of animals.

Findings: (1) When an infant is lifted with body support at the sides, the arms fly out and are then brought in toward the median plane, with grasping movements of the hand (Moro reaction); the legs are extended. (2) When the child is lifted with support at the back and abdomen, the fingers are outspread, the plantar reflex occurs, and the body shows a tension pattern similar to that of a person preparing to jump. These systems of responses are similar to those found in animals. (3) The Landau reflex involves an arching up of the legs and head when the infant is placed prone on a table; this is explained in terms of tonic neck reflexes, and does not occur in children over two years of age. (4) When a newborn infant is held by the legs, head down, he is non-reactive, but after a few days labyrinth adjustment reflexes occur, involving pseudo-swimming and pawing movements in the air; at the age of three months, the head is arched upwards in a characteristic manner. These reactions are observed regularly only in children below five years. (5) Rising to a sitting position is accompanied by a torsion of the spine. Between two and five years of age this pattern changes and takes the characteristic form of the adult movement, without torsion.

44. Sherman, M. "Motor responses to sensory stimuli in infants." *Arch. of Neur. and Psychiat.*, 12: 1924, 245-247.

Problem: To determine motor responsiveness in newborn infants.

Method: Examination of 96 normal full-term infants, 1 to 12 days of age at a maternity hospital.

Findings: Pupillary response to light is present from three hours on and becomes increasingly adequate up to about 30 hours. When needle pricks are employed to elicit avertive response, the number of stimuli necessary to produce the response decreases from 1 to 21 hours, and more slowly to 76 hours. Visual fixation on a light improved up to 34 hours, after which no fixative errors were made. Defense coördinations of the arms (thrusting away an object pressed against the chin) were inadequately made before 21 hours, but showed steady improvement after that time.

45. Taylor, Jones L. "A study of behavior in the new-born." *Amer. Jour. Med. Science*, 174: 1927, 377-389.

Problem: To discover, through neuromuscular reaction of the newborn, whether personality differences are evident in the day-old baby, and to determine whether these investigations can be made to yield a prognosis in individual cases as to their mental equipment.

Method: Seventy-five healthy babies were tested twice by a standard schedule of stimuli during the first and second days of life. Babies examined were from private practice and from white and colored maternity wards in Washington, D. C. More than half were children of primaparae and more than half (39) were boys. The health of the babies was followed for ten days sufficiently to know that no one of

them developed a disease of the new-born which might affect the reactions.

Findings: Measurements of the arms and legs were the same, except that in infants born before term the arm was relatively longer; if the legs were longer, the infant had arrived after the expected date. Of the 75 subjects, 73 showed Babinski's sign. Five were negative; 68 were positive; 28 of the 68 gave both negative and positive signs. As a response to pinching the foot, "on the first day the baby cries and waves his legs around in the air aimlessly. On the second day, when pinched, the foot is quickly drawn away and the cry follows." Tests were made of the pupillary reflex, eye coördination, and focusing. Evidence of focusing was demonstrated in 23 of the babies. The author concludes that babies at birth show significant personality differences and that the changes in behavior which occur during the first few days are evidence of learning.

46. Terman, L. M. *Genetic Studies of Genius, Vol. I.* Stanford University Press, 1925. (Ch. VIII, "Health and physical history," pp. 185-187, "Early development.")

Problem: To compare data on early development of superior and average children.

Method: Data from medical and home blanks (testimony of parents) on age of appearance of sitting alone, first dentition, talking, and walking are tabulated and compared with means on normal and feeble-minded infants.

Findings: Age of learning to walk averaged about one month less, and of learning to talk about 3½ months less, than mean ages for normal children.

47. Thompson, T. M. "A baby's nursing difficulties. A study case." *Ped. Sem.*, 33: 1926, 709-716.

Problem: To discover the factors which influence the development of the nursing reflex in normal children.

Method: Case study of a girl baby with nursing difficulties.

Findings: Owing to difficult breast conditions the nursing reflex did not develop properly in this case. Improvement followed use of nipple shield, which could later be discarded. The author concludes that many cases of supposed lack of mother's milk are due to the child's inability to empty the breast and so stimulate production.

48. Town, C. H. *Analytic Study of a Group of Five- to Six-Year-Old Children.* Univ. of Iowa Studies in Child Welfare. Vol. I, No. 4, 87 pp.

Problem: To determine the technique and content of an individual examination which will equip teachers, at a child's entrance in school, with adequate knowledge of his abilities and disabilities.

Method: In addition to other measurements, a series of psychomotor tests were employed, "the successful performance of which depends upon physical and muscular fitness and also upon central motor control." Right and left grip, steadiness (stationary and moving) and accuracy of aim with right and left hand, were measured in about 40 children. Tests of reproducing lines, manipulating wires, and the Porteus maze were also employed.

Findings: Norms were obtained and also psychological profiles of presumptive value in individual prognosis.

49. Tromner, E. "Reflexuntersuchungen an einem Anencephalus." ("Investigations of the reflexes in an anencephalus.") *J. f. Psychol. u. Neur.*, 35 : 1928, 194-198.

Problem: To investigate the reflexes of an infant, born with the cerebrum absent, and with a defective development of all centers above the pyramidal decussation.

Method: Examination of motor and sensory functions during the two days of the child's life.

Findings: (1) The Babinski reflex and the labyrinthine and neck reflexes were absent; (2) overt responses to light, sound, smell, and taste were absent; (3) general body tonus was present; (4) reflex responses could be elicited to pressure, pain, cold (but not to warmth) and to contact stimuli on the hand; (5) the plantar, grasping, and suspension reflexes were present. The evidence appears to indicate that the plantar is the most primitive foot reflex.

50. Wagoner, L. C. "A note on the grasping reflex." *Ped. Sem.*, 31 : 1924, 333-335.

Problem: Is persistence of the grasping reflex related to retarded development?

Method: Complete case history of a microcephalic idiot, observed from the age of 12 to 20 months.

Findings: The unusual persistence of the grasping reflex, in this case, supports its use as an index of mental retardation.

51. Wagoner, L. C., and Armstrong, E. M. "The motor control of children as involved in the dressing process." *Jour. of Gen. Psych.*, 35 : 1928, 94-97.

Problem: (1) To study the motor control necessary for manipulating buttons and buttonholes, and the ability of children to manage different sizes of buttons and different types of fastenings; (2) to ascertain a criterion by which a parent may know when a child has acquired such motor control that he is ready to learn to dress himself.

Method: Thirty children enrolled in the nursery school at Iowa State College were used as subjects for a series of intelligence tests and a number of standard dressing situations. Arm span and span between

thumb and each finger were measured. In addition to observations of children manipulating their own clothing, records were taken with experimental material consisting of sleeveless jackets with buttons of different sizes and in different positions.

Findings: (1) The average time for buttoning and unbuttoning decreases from year to year. (2) Girls surpassed boys in all of the jacket tests. (3) Four children, from 24 months to 30 months of age, seemed to lack the motor control necessary to manipulate buttons. (4) Tests of buttoning and unbuttoning (in front) correlated .77 and .75 with Merrill-Palmer total scores, but only .09 and .15 with the Stanford-Binet. (5) Situations of this nature are interesting to the children. Individual differences in the responses to the general situation suggest the usefulness of such tests in personality studies.

52. Watson, J. B. *Psychology from the Standpoint of the Behaviorist.* New York: Lippincott, 1919. 2nd Ed., 296-299.

Problem: To study the genesis of an eye-hand coördination.

Method: Cumulative observations of an infant from 80 to 171 days. A stick of candy was suspended within easy reaching distance; unsuccessful movements were noted (right and left), also the time required to bring the candy to the mouth.

Findings: Before 122 days the child was unable to effect an eye-hand coördination. When grasping occurred, it was slow and clumsy, and without thumb opposition. By 171 days a well-coördinated movement was established, with right-hand preference.

53. Wellman, B. *The Development of Motor Coördination in Young Children: an Experimental Study in the Control of Hand and Arm Movements.* Univ. of Iowa Studies in Child Welfare. Vol. 3, No. 2, 51 pp.

Problem: (1) To make an analysis of the influence of direction of movement on control of the hand and arm in young children. (2) To analyze the muscular and psychological factors involved in such control. (3) To note age, sex, and individual differences. (4) To determine the relative development and control of right and left hand.

Method: (1) A modification of a Stoelting tracing board was presented in eight different positions, the child being directed to trace the path with a metal stylus. (2) A printed sheet duplicated the form and area of the tracing-board paths; the child was instructed to draw a line down the path. In all, 136 subjects were tested, from 3 to 6 years of age.

Findings: (1) The printed tracing was more reliable and also for other reasons was more satisfactory than the board. (2) Sex differences were absent. (3) Correlations of age with score were of the order of .80. (4) The older children show a diminished trunk and leg movement, and a tendency to restrict manipulative control to the hand and wrist. (5) Movements with the left hand were more difficult than with the right,

and the difference between the hands increased with age. (6) Lateral movements were difficult for each hand; movements from left to right were particularly difficult for the right hand. (7) The greatest accuracy was shown for upward movements from right to left. (8) Quicker and straighter movements were made when the inhibiting effect of the printed guide lines was removed.

54. Wellman, B. "Significant factors in the motor coördination of young children." *Psych. Bull.*, 25: 1928, 178-179.

Problem: To determine the relative ease and control of movements toward, compared with movements away from the body.

Method: One hundred and thirty-six children, 3 to 6 years of age, were tested in 8 directions of a tracing path movement.

Findings: Contrary to certain neurological theories, outward movements (away from the body) are not significantly harder to make. These results have since been supported by data from an additional 65 children (communicated by the author).

55. Wolff, L. "A method of studying foot formation during the development of locomotion." (Unpublished) Institute of Child Welfare, Univ. of California.

Problem: To study the development of the foot as influenced by the functioning of the foot musculature during walking.

Method: Footprints during walking are made by having children walk through a tray of powder and across a black cardboard surface; the resulting prints are made permanent by a fixative spray. Prints are also taken while the child is in a standing and in a sitting postion. Foot measurements and contours can be determined from these prints, and the unequal pressures of different parts of the foot can be read from the different shadings in the chalk deposit. By observations of children's walking, considered in relation to their footprints, it is possible to draw inferences concerning the significance of the pressure shadings.

Findings: Records have been taken from 50 children in two nursery schools, aged 20 to 48 months. The cumulative findings are to be published later.

CHAPTER III

STUDIES IN LANGUAGE DEVELOPMENT[1]

In view of the conflicting opinions in regard to what language development is, no attempt is made in this section to settle upon any one definition of the term. It is impracticable to include here the report of all studies of young children of which language and speech, in their broadest connotation, are a part, for practically every study on the preschool child would be included. This section is therefore arbitrarily limited to a discussion of those studies in which the primary purpose has been to investigate the speech or language development of the young child, either as a separate phase or in combination with other phases of development. A few additional significant studies have been included, in which language, particularly vocabulary, has been a prime essential to the subject matter under investigation.

I. Survey of Completed Research

1. Baldwin, B. T., and Stecher, L. I. *The Psychology of the Preschool Child.* New York: Appleton, 1925. 305 pp. (pp. 129-130).

Problem: To test the child's ability to recall the name of familiar colors.

Method: Forty-eight children, aged from 3 to 6 years, were tested. For this test the upper half was cut from the Woodworth and Wells color-naming blank. This consisted of fifty small squares of color. The sample section of yellow, black, green, red, and blue was also cut from the blank, and the experimenter determined whether the child knew these fundamental colors. If he did not, the colors were taught. Then the child was asked to name and point to the colors on the blank.

Findings: Efficiency in performing the test obviously depended on ability to name the colors. Nine of the forty-eight children never succeeded in learning the names of the colors. The time required for naming fifty colors averaged from 159.7 seconds at 3 years to 92.1 seconds at 6 years. Slight fatigue or distraction resulted in the breaking down of the association.

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[1] Dorothy E. Bradbury, Research Assistant, Iowa Child Welfare Research Station, has given valuable aid throughout the preparation of this chapter.

2. Baldwin, B. T., and Stecher, L. I. *The Psychology of the Preschool Child.* New York: Appleton, 1925. 305 pp. (pp. 130-133).

Problem: To study the strength of certain associative bonds in young children.

Method: The material for the experiment consisted of pictures of fifty familiar objects, pasted on cards. The experimenter asked the child what each picture represented.

Findings: The age scores increased from 19.2 pictures at 2 years to 29.7 at 3 years, 38.0 at 4 years, 44.0 at 5 years, and 45.6 at 6 years.

3. Baldwin, B. T., and Stecher, L. I. *The Psychology of the Preschool Child.* New York: Appleton, 1925. 305 pp. (pp. 157-158, 162).

Problem: To study the number concepts of preschool children.

Method: (1) The child was asked to count as far as he could. The score was the highest number correct without intervening error. (2) The child was told to count marbles. (3) The child gave the examiner varying numbers of sticks.

Findings: The findings led to the following conclusions with regard to the group of children studied: (1) The ability to count objects develops at the same time as the learning of number names, but lags somewhat behind. (2) Counting with objects is more difficult than merely repeating several numbers. (3) The learning of 1 to 20 is the most difficult. (4) The child's knowledge of number is not fixed.

4. Baldwin, B. T., and Stecher, L. I. *The Psychology of the Preschool Child.* New York: Appleton, 1925. 305 pp. (pp. 164-169).

Problem: To study the time concepts of preschool children.

Method: Forty-seven questions, divided into two groups, were asked 40 preschool children. The first group (31 questions) dealt with short intervals of time and the daily schedule of events; the second group (16 questions) dealt with longer intervals, such as the seasons and age relationship.

Findings: One of the 20 children in the younger group (from 2 to 3 years of age) and 12 of the 20 children in the older group (from 3 to 4 years of age) knew the day of the week. More than half the children knew whether it was morning or afternoon, and about the same number understood *to-morrow* as distinguished from *to-day*. The majority of the children knew the three main meals of the day. The majority of the children were oriented with regard to special days of the week, but had little conception of annual holidays. The concept of a long number of years was poorly developed.

5. Bateman, W. G. "A child's progress in speech with detailed vocabularies." *Jour. Educ. Psychol.*, 5: 1914, 307-320.

Problem: To determine one child's progress in speech, from the twelfth to the twenty-eighth month.

Method: The vocabulary of one year was merely listed. For two weeks, beginning with the twenty-ninth month, everything the child said was recorded. Occasions were made for her to use well-known words. Words were listed according to parts of speech.

Findings: At 28 months the child had 405 words as compared with 10 at one year. The color vocabulary at 29 months included only *pink* and *white.*

6. Bateman, W. G. "Two children's progress in speech with detailed vocabularies." *Jour. Educ. Psychol.*, 6: 1915, 475-493.

Problem: To trace the development of vocabulary from the twenty-eighth to the thirty-sixth month of one child and through the first year of another.

Method: During the three weeks before the child's birthday everything the child said was recorded.

Findings: The second child made her first vocal sound during the eighth week. This was long *a.* Almost immediately the first consonant was prefixed to this, resulting in *ba.* Imitation occurred during the seventh month. At 12 months the second child used 9 words, the first child 10. At 36 months the first child had a vocabulary of 738 words, including 399 nouns, 164 verbs, 75 adjectives, 52 adverbs, 21 pronouns, 13 prepositions, 2 conjunctions, and 12 interjections, as compared with 405 words at 29 months.

7. Bateman, W. G. "The naming of colors by children: The Binet test." *Ped. Sem.*, 22: 1915, 467-486.

Problem: To study the ability of children to name colors.

Method: The literature for the preschool age was summarized.

Findings: The earliest use of a color term was recorded by Shinn, who reported one child's use of *red* at 16 months and the average to be at 19.4 months. The two-year-old child knew, on an average, 2.5 color terms, with a range of from 0 to 6 color terms, according to the summary of fifteen studies. The three-year-old child knew, on an average, 8.4 color terms, with a range of from 4 to 13, according to the summary of seven studies. The four-year-old child knew, on an average, 8.8 color terms, with a range of from 6 to 12, according to the summary of five studies. One child at 5 years knew 6 terms and at 6 years 7 color terms.

8. Bateman, W. G. "The language status of three children at the same ages." *Ped. Sem.*, 23: 1916, 211-240.

Problem: To study the language status of three children 28 months of age and of approximately the same mental age and general background.

Method: The spontaneous words were recorded during a two-weeks interval. These data were supplemented by the recorded observations since the birth of the children.

Findings: The children varied in spontaneous interest in speech activity. All three children used the first word with definite meaning at about the same time, approximately 10.5 months. Only single words were used by the children for a period varying from five to six months.

9. Bateman, W. G. "Papers on language development. The first word." *Ped. Sem.*, 24: 1917, 391-398.

Problem: To study the beginning of language, the first spoken word.

Method: The literature was summarized.

Findings: The ages of the children at the time of using the first word varied from 8 to 15 months.

10. Bell, S. "The significance of activity in child life." *Independent*, 4: 1903, 911.

11. Beyer, T. P. "The vocabulary of two years." *Educ. Rev.*, 49: 1915, 191-203.

Problem: To determine the vocabulary of a boy 2 years of age.

Method: A record was kept of all words used spontaneously during the twenty-third and twenty-fourth months.

Findings: The boy had a vocabulary of 771 words, 21 percent of which were verbs.

12. Beyer, T. P. "The vocabulary of three years." *Educ. Rev.*, 52: 1916, 478-489.

Problem: To determine the vocabulary at 3 years of age of the boy whose vocabulary at 2 years had been reported in a previous article.

Method: A record was kept of all words used spontaneously during the thirty-fifth and thirty-sixth months.

Findings: The boy's total vocabulary was 2055 words; he had made a gain of 1297 words, including 141 proper names. Thirteen of the early words had dropped from use.

13. Binet, A., and Simon, T. "Langage et pensée." *L'Année psychol.*, 14: 1908, 284-339.

Problem: To determine the language status of feebleminded persons to secure an insight into the language status of normal children of the same mental age. An idiot, low-grade, middle-grade, and high-grade imbecile were observed.

Method: A record was kept of the words used spontaneously, and observations were made on the manner of articulation and the comprehension of words as shown by the answers to questions.

Findings: The idiot was capable of understanding gestures and executing simple orders given by gesture. The low-grade imbecile

could follow simple verbal commands. The middle-grade imbecile could name common objects when pointed out and compare two objects such as weights. The high-grade imbecile could repeat three numbers, carry out three commands simultaneously, and knew the days of the week, the names of the months, and the number of fingers.

An individual analysis of the language status of the individuals studied was given, including an analysis of the sounds used.

14. Blanton, M. G. "The behavior of the human infant during the first thirty days of life." *Psychol. Rev.*, 24: 1917, 456-483.

Problem: To study the behavior of the human infant during the first thirty days of life.

Method: A record of observations with regard to the appearance of certain physical phenomena was kept for a large number of infants.

Findings: Language has its beginnings in the birth cry, the cries varying with the need demanding recognition. The birth cries ranged from simple *a* (as in *at*) to *u* (as in *cut*). Most of them were compound *u* followed by *wah* (as in *at*), *uh* (as in *cut*), *nga* (as in *at*), and variations.

Crying was observed under the following conditions: hunger, in response to noxious stimuli, and possibly from fatigue or lack of exercise. There were differences of vowels and consonants, and of timbre and degree, but no one sound was used as response to one set of circumstances that was not at some time used for others. The cries did not vary so much with the ages of the infants during the first five or six days as with weight. The crying of one baby could be distinguished with some practice from that of another. A description is given of cries used in specific situations.

15. Bloch, O. "La phrase dans le langage de l'enfant." *Jour. de psychol.*, 21: 1924, 18-43.

Problem: To study the beginnings of the sentence in the language of the child.

Method: The sentences of three children were recorded as used.

Findings: The child first used isolated words that the author called one-word sentences. Frequently the child represented the verb with a gesture. This stage began at about from 20 to 23 months. The next step was the use of two-word sentences; it occurred at about the twenty-fifth month in the language of the three children reported. About the twenty-fifth month, the preponderance of nouns over verbs in the child's language was striking. Prepositions and conjunctions were used infrequently during the third year. The little child frequently changed the order of words in sentences.

16. Bohn, W. E. "First steps in verbal expression." *Ped. Sem.*, 21: 1914, 578-595.

Problem: To analyze in detail the development of a child's vocabulary to the twenty-eighth month.

Method: A word list was kept of the words as they appeared. During the fourteenth and fifteenth months all the sentences used were recorded.

Findings: The child laughed during the ninth week. During the tenth week she endeavored to express herself by means of sounds. At 13 months she could use 11 words. The first sentence appeared on the twelfth day of the fifteenth month. The child used *green* and *yellow* at 17 months, *blue* and *red* at 19 months, *gray, white,* and *brown* at 21 months, *pink* at 25 months, and *purple* at 26 months.

17. Boyd, W. "The beginnings of syntactical speech: a study in child linguistics." *Child Study,* 6: 1913, 21-24, 47-51.

Problem: To study the beginnings of syntactical speech.

Method: As much as possible was recorded of a girl's speech during the last week of her twentieth month. This procedure was repeated the last week of the twenty-first, twenty-second, twenty-third, and twenty-fourth months. Sentences occurring the last ten days of the thirty-sixth month were recorded.

Findings: A total of 1236 sentences and 4137 words was obtained. The sentences of the child at 2 years were extremely brief, consisting of an average of 3.3 words. The child had best command of the parts of speech that have concrete reference; prepositions and conjunctions were usually omitted. At 2 years of age 44.7 percent of the vocabulary were nouns, and at 3 years 42.8 percent. Elliptical sentences were common.

18. Boyd, W. "The development of a child's vocabulary." *Ped. Sem.,* 21: 1914, 95-124.

Problem: To study the development of a child's vocabulary.

Method: Observations were recorded with regard to sentence structure as the child's language developed. During the last week of the twentieth month the sentences used were collected. This was repeated the last week of each month to the end of the second year, during the last fortnight of the thirty-sixth month, and during the last fortnight of the forty-eighth month.

Findings: (1) The first word occurred in the child's eleventh month. There was a large increase in vocabulary between 2 and 3 years and a small but definite increase between 3 and 4 years. (2) There were comparatively few pronouns in the two-year-old's speech, the only ones in easy use being the demonstratives. The number increased rapidly in the third and fourth years. Personal pronouns were responsible for the increase. (3) The vocabulary at 17 months consisted of 117 words, 70 percent of which were nouns; at 2 years, of 656 words, with 49 percent nouns; at 3 years, of 960 words, with 43 percent nouns; and at 4 years, of 1031 words, with 42 percent nouns. (4) At 2 years the numbers 1 and 2 were known; at 3 years, 1 to 4; at 4 years 1 to 6.

At 2 years, the child knew *black, dark, red, white,* and *yellow;* at 3 years, *black, black-and-blue, brown, dark, glossy, pink, red,* and *white.*

19. Boyd, W. "The development of sentence structure in childhood." *Brit. Jour. Psychol.* (Gen. Sect.), 17:1927, 181-191.

Problem: To study the development of sentence structure in childhood.

Method: A record was kept of a girl's sentences spoken between 2 and 8 years of age.

Findings: The developmental aspects of sentence forms, parts of speech, length of sentences, and the use of idioms were reported.

20. Brandenburg, G. C. "The language of a three-year-old child." *Ped. Sem.,* 22: 1915, 89-120.

Problem: To study the language expression used in one day by a three-year-old child.

Method: A record was kept of one day's language expression.

Findings: The child uttered a total of 11,623 words, of which 859 were different words, and 1873 sentences, of which 345 were questions.

21. Brandenburg, G. C., and Brandenburg, J. "Language development during the fourth year. The vocabulary." *Ped. Sem.,* 23: 1916, 14-29.

Problem: To study the development of language during the fourth year.

Method: Approximately one month following the girl's fourth birthday was spent in observing and recording words used.

Findings: The vocabulary included 3915 words. The total increase during the year amounted to 1633 words, or 52 percent.

22. Brandenburg, G. C., and Brandenburg, J. "Language development during the fourth year. The conversation." *Ped. Sem.,* 26: 1919, 27-40.

Problem: To study the conversations of a four-year-old child.

Method: A record was made of the conversation of a child for the entire day when she was 40 months old, and again when she was 52 months old.

Findings: At 52 months the child uttered 14,930 words during the day, an average of 1244 words per hour; at 40 months she used 11,623 words, an average of 950 per hour. At 52 months, 397 questions were asked, an average of 33 per hour; at 40 months, 376 questions were asked during the day. At no time was the child silent for a period exceeding four minutes. At 40 months she used 859 different words; her total vocabulary contained 2500 words. At 52 months she used 1000 different words; her total vocabulary then contained 4200 words.

23. Brooks, F. D. "The vocabularies of children, ages one to eight or nine." *Baltimore Bull. Educ.*, 4: 1926, 153-155.

24. Bush, A. D. "The vocabulary of a three-year-old girl." *Ped. Sem.*, 21: 1914, 125-142.

Problem: To determine the vocabulary of a three-year-old girl.

Method: (1) Records of all words used were kept for six months previous to the child's third birthday. A small dictionary was scanned for words used intelligently by the child. Comparisons were made with the published vocabulary of a three-year-old boy for words the child knew but had not used.

Findings: The girl's vocabulary contained 1900 words. She had a very quick eye for color values and assorted the sixty-four shades of the eight principal colors in the Montessori scheme. She could correctly select and name white, black, gray, tan, pink, violet, blue, green, yellow, orange, red, and gold.

25. Campbell, C. V. "Two recent studies of children's vocabularies." *Child Study Mo.*, 6: 1901, 277-280.

Problem: To study the vocabulary of two children between the ages of 2 and 2.5 years.

Method: Observations were continuous for a period of two days.

Findings: The vocabulary of an average child of 2 years appears to be about 700 words, that of a child of 2.5, 1400. A child uses from 50 to 60 percent of his entire vocabulary in one day.

26. Chamberlain, A. F., and Chamberlain, I. C. "Studies of a child. II." *Ped. Sem.*, 11: 1904, 452-483.

Problem: To study the child's language from the first word to the fortieth month.

Method: Notes were taken at random.

Findings: The child cut many words, running several together in a manner analogous to that of primitive peoples. The meanings of words were often by analogy transferred to other things in the environment. Caressive repetitions, playing with words and phrases, were often noted. A few sentences involving comparisons were noted during the latter part of the period. Definitions of words involved the use of the object. By the eighth month "pa papa" was pronounced with no clear relation to the parents. A week later the child applied the word to her father. Certain phrases such as "Hello" seemed to be favorites and were repeated and used frequently. During the thirty-first to the thirty-fifth months considerable elasticity of word order in sentences was observed. At the age of 11 months the child used her first invented words, indicating interest.

27. Chamberlain, A. F., and Chamberlain, I. C. "Studies of a child. IV. 'Meanings' and 'definitions' in the forty-seventh and forty-eighth months." *Ped. Sem.*, 16: 1909, 64-103.

Problem: To study the word 'meanings' as given in definitions by a child in her forty-seventh and forty-eighth months.

Method: The child was asked to give the meanings of lists of words divided according to nouns, verbs, adjectives, adverbs, pronouns, prepositions, and interjections.

Findings: The definitions given showed that words were defined according to use by contrast, by actions (pointing, touching), and by analogy.

28. Champneys, F. H., "Notes on an infant." *Mind,* 6: 1881, 104-107.

Problem: To study a baby from birth through the ninth month.

Method: Notes were taken on the baby's development.

Findings: (1) The child appeared to cry for three reasons: loneliness or fright, hunger, and pain. The cries were all different in character. The sound of the cry can be expressed by *nga* as pronounced in German. (2) Smiling was reported at five and one-half weeks, but not certainly observed before the end of the eighth week. (3) From the ninth month the child distinctly imitated the intonation of the voice when any word or sentence was repeated in the same way several times.

29. Child Study Committee of the International Kindergarten Union (M. D. Horn, chairman). *A Study of the Vocabulary of Children before Entering the First Grade.* Baltimore: Williams and Wilkins, 1928. 36 pp.

Problem: The problem was to find the vocabulary of normal children before entering first grade.

Method: This vocabulary list had three sources: M. D. Horn's kindergarten list, a picture list determined from records of children's conversation when stimulated by pictures, and records of children's conversations at home. The kindergarten and picture lists are for children of 5 years, the home list for children of 4 and 5 years. A word was determined as such if so called in Webster's International Dictionary (1925 edition). The following were also called words: two or more words representing one concept—for example, kiddie kar; children's words—for example, choo; proper names of more than personal interest—for example, Humpty-Dumpty; slang expressions; inflections of nouns, verbs, pronouns, and adjectives; contractions; commercial words—for example, victrola; and colloquialisms.

Findings: A list of 2500 words is presented.

30. Cobb, M. V. "Tentative order of difficulty of the Terman vocabulary with very young children." *Jour. Educ. Psychol.*, 13: 1922, 357-362.

Problem: To study the order of difficulty of the vocabulary test in the Stanford revision of the Binet tests with young children.

Method: The test was given to kindergarten children. The test was stopped when the child missed five successive words.

Findings: The words in the vocabulary test showed an order of difficulty different for young children from that indicated on the blanks. The larger changes in order seemed to be due to the fact that certain more abstract terms, such as *afloat, haste,* and *mellow,* were relatively more difficult at these ages.

31. Conradi, E. "Psychology and pathology of speech development in the child." *Ped. Sem.*, 11: 1904, 328-380.

Problem: To bring together, compare, and criticize numerous investigations.

Method: The literature was summarized.

Findings: Many German sources, chiefly theoretical in treatment, are quoted.

32. Cooley, C. H. "A study of the early use of self-words by a child." *Psychol. Rev.*, 15: 1908, 339-357.

Problem: To study the early use of a child's words denoting self.

Method: Records were made from observation. They extend from soon after birth until the thirty-third month, but relate chiefly to the period beginning with the twentieth month.

Findings: The correct understanding of *I* and *You* when used by others was achieved by the middle of the nineteenth month. Early in the twenty-second month the use of *I* was imitated with apparent sense of the subjective reference. Others were named before self. The child first used *baby* as referring to self about the twenty-fourth month.

33. Court, S. R. A. "Numbers, time, and space in the first five years of a child's life." *Ped. Sem.*, 27: 1920, 71-89.

Problem: To study the development of one child's conceptions of numbers, space, and time from the age of 20 months to 5 years.

Method: Observation and leading questions were used.

Findings: At the age of 20 months the child used *two* but did not know *one.* Numbers above *two* were ignored. At 2 years he used *one* and *two;* at 2 years, 9 months, he acquired *three.* At 4 years he knew numbers up to *four* and could do simple mathematical problems. At 5 years he knew and recognized numbers up to *five.* He could count to 100 at 4 years, 3 months. At 2 years his conception of the past reached three or four days. At 2 years, 9 months, he knew the relation between *yesterday, to-day,* and *to-morrow.* He learned to tell time at 4 years, 10 months. At 2 years, 10 months, he became interested in *long* and

short and understood *large* and *small.* At 4 years he understood the meaning of *far* and *near.*

34. Darwin, C. "A biographical sketch of an infant." *Mind,* 2: 1877, 285-294.

Problem: To study the development of a child during infancy.

Method: Observational notes were made.

Findings: During the first seven days various reflex actions such as sneezing, hiccoughing, yawning, stretching, sucking, and screaming were performed. After the eleventh week the child's squall differed according to cause. At 5.5 months the child uttered an articulate sound, *da,* but without meaning. The first word occurred at 12 months. An incipient laugh was observed on the 113th day.

35. "David's vocabulary till three years old." *Child Life,* 13: 1911, 22-24.

Problem: To determine the extent of the vocabulary of a three-year-old boy.

Method: The mother listed all the words as they occurred until the child was 3 years of age.

Findings: The child had a vocabulary of 943 words.

36. Dearborn, G. V. N. *Motor-Sensory Development: Observations on the First Three Years of Childhood.* Baltimore: Warwick and York, 1910. 215 pp.

Problem: To study the development of the child during the first three years of childhood.

Method: Observations were recorded daily.

Findings: The child smiled dimly when tickled on the cheek on the fifth day. On the seventh day she smiled spontaneously. On the seventeenth day crying was differentiated according to cause. She laughed aloud on the fifty-eighth day. On the sixtieth day she began to use the vocal organs imitatively. On the 297th day she imitated sound. On the fifty-third day she vocalized the sound *a,* on the seventy-eighth day *a* and *oo,* and on the 248th day a consonant. On the 284th day she used the first word. On the 577th day she used the first sentence. On the 596th day she understood the word *to-morrow* and on the 724th day the word *yesterday.* On the 225th day she distinguished red, yellow, and blue.

37. Descoeudres, A. "La mésure du langage de l'enfant." *Jour. de psychol.,* 21: 1924, 43-47.

Problem: To discover the number of words in the vocabulary of children from 2 to 7 years of age.

Method: The author used her complete and partial language tests (for description see next abstract). Three children were subjects.

Findings: One child at 2 years, 9 months, had a vocabulary of 639 words; one child at 5 years had 1950 words; and one child at 7 years had 2900 words.

38. Descoeudres, A. *Le Développement de L'Enfant de Deux à Sept Ans.* Neuchâtel or Paris: Delachaux and Niestle, [1921], 331 pp.

Problem: To standardize a scale for the measurement of the language development of the child from 2 to 7 years of age.

Method: The method consisted of a series of questions intended to examine the understood vocabulary; a language test from the point of view of phonetics; some immediate memory tests (repeating numbers and syllables) and mediate tests (songs, poetry, days of the week, months of the year); a spoken language examination consisting of some vocabulary questions (enumeration and description of pictures, words known in a list of twenty-five, etc.); a certain number of knowledge tests (questions concerning the child, his age, his friends, colors, etc.); and some intelligence questions in which judgment plays a rôle. These questions were called the complete tests and were given to 65 French children of the wealthy and common classes. A test was placed at a given age in the scale when passed by three-fourths of the children at that age. Certain questions giving the best gradation for age were chosen from the complete tests to constitute the series called the partial test. The relation between the two tests was determined. The partial tests were given to from 290 to 330 subjects from two social groups, the wealthy and the common classes.

Findings: The scale permitted the calculation of the linguistic age of the child. The two-year-old child of the wealthy class had a vocabulary of 1104 words; of the common class, 744. The three-year-old child of the wealthy class had a vocabulary of 1880; of the common class, 1544 words. The four-year-old child of the wealthy class had a vocabulary of 2216; of the common class, 1896 words. The five-year-old child of the wealthy class had a vocabulary of 2592 words; of the common class, 2152. The six-year-old child of the wealthy class had a vocabulary of 2832 words; of the common class, 2448 words. The proportion of nouns decreased with age. The proportion of verbs increased with age. The greatest gain in vocabulary was made between the second and third years.

39. Dewey, J. "The psychology of infant language." *Psychol. Rev.*, 1:1894, 63-66.

Problem: To determine the relative frequency of the parts of speech in the language of A, 19 months old, and of B, 18 months old.

Method: A's vocabulary was kept continuously; B's vocabulary was taken from words used within a period of five or six days.

Findings: A's vocabulary contained 60 percent nouns, 21 percent verbs, 11 percent adjectives, 3 percent adverbs, and 5 percent interjections. B's vocabulary contained 53 percent nouns, 28 percent verbs, 1 percent adjectives, 6 percent adverbs, 5 percent interjections, 6 percent pronouns, and 1 percent conjunctions.

40. Doran, E. "A study of vocabularies." *Ped. Sem.*, 14: 1907, 401-438.

Problem: (1) To study the extent of a person's vocabulary at various periods from infancy to maturity; (2) to determine the relation of sex to vocabulary; (3) to determine the effect of race, nationality, and climate on vocabulary; (4) to determine the value of a good vocabulary; and (5) to study how to secure a good vocabulary.

Method: The literature was summarized.

Findings: A tabular summary of vocabularies below the school age is presented. The remainder of the material is on school children and adults.

41. Drever, J. "A study of children's vocabularies." *Jour. Exper. Ped.*, 3: 1915, 34-43, 96-103, 182-188.

Problem: To make a comparative study of the vocabularies of children of different ages and from different social environments.

Method: A study was made of the vocabularies of the author's children, J, D, and H, who were 54.5 months, 43 months, and 28 months old. Every word used during a ten-day period was noted. A preliminary report was also made of a study of vocabulary in a school environment. The words used by kindergarten children were recorded during two hours a day for a six weeks' period. The children varied in age from 2.5 to 5 years of age.

Findings: J's vocabulary contained, at 54 months, 1700 words, excluding proper names; D's, at 43 months, 824 words; and H's, at 28 months, 345 words. At 34 months, H's vocabulary had increased to 694 words. J's vocabulary contained many words referring to the sea and ships as a result of environment. The language of the kindergarten children contained 51 percent nouns; J at the same age had 59.1 percent nouns. The kindergarten children showed marked deficiency compared with D and J in words relating to "food and drink," "person and dress," "animal," "plant," "physical," and "outside environment." The "social" division showed a better percentage for the kindergarten children.

42. Drever, J. "The vocabulary of a free kindergarten child." *Jour. Exper. Ped.*, 5: 1919, 28-37.

Problem: (1) To determine the normal extent of the vocabulary of a child of 5 years or less, living in slum conditions. (2) To determine by detailed analysis the nature of the vocabularies of children at different ages and of the kindergarten child as a type. (3) To determine the effect of the kindergarten on the vocabularies of children.

Method: The spoken language of the 13 boys and 8 girls in kindergarten was observed and recorded two hours a day for from six to ten weeks. The ages varied from 27 to 63 months.

Findings: The 4 children 3 years of age had an average vocabulary of 376 words, of which 54.4 percent were nouns. The 5 children 4 years

of age had an average vocabulary of 451 words, of which 59 percent were nouns. The 12 children 5 years of age had an average vocabulary of 580 words, of which 58.6 percent were nouns.

43. Drummond, M. "Notes on speech development. I." *Child Study,* 9: 1916, 83-86.

Problem: To study the development of speech in a little girl.

Method: A continuous record was made of the child's development.

Findings: The child used no words at 12 months, although she babbled freely. She obeyed simple commands at 15 months and used specific sounds to represent wants at approximately 15 months. She used her first word at 16 months, and her first sentence at 26 months.

44. Drummond, M. *Five Years Old or Thereabouts.* London: Edward Arnold, 1925. 180 pp. (pp. 45-80).

Problem: To determine the vocabulary of one child at 31 months and 62 months of age, and of another child at 56.5 months.

Method: Everything the children said spontaneously during a ten-day period was recorded. For the child observed at 31 and 62 months the father checked in a small dictionary, during the second period, the words he had heard the child use previously. Proper nouns were not included.

Findings: The one child, at 31 months, had a vocabulary of 726 words; at 62 months a vocabulary of 2195 words. The other child, at 56.5 months, had a vocabulary of 2103 words, of which 1239 were verbs.

45. Fenton, J. C. *A Practical Psychology of Babyhood: The Mental Development and Mental Hygiene of the First Two Years of Life.* Boston: Houghton Mifflin, 1926. 348 pp. (pp. 118-144).

Problem: To study the mental development of the first two years of life.

Method: Original observations and organization of published findings are the basis of this study.

Findings: The author noted a dawning of rudimentary social consciousness at about the sixth week, when there was a marked attempt at self-expression. Among the baby's first sounds were a number of gutterals not used in English; the German *ch,* a harsh throaty *gh,* the German *ö,* the French *eu.* All the English sounds occurred, with the exception of *f* and *v,* during the first year. By the thirty-eighth week the child used an explosive *t-t-t* to signify his mother. Until the middle of the second year he used very few verb forms, although many verbal meanings were conveyed. By the end of the second year nearly all the child's sentences contained verbs.

46. Gale, M. C., and Gale, H. "Children's vocabularies." *Pop. Sci. Mo.,* 61: 1902, 45-51.

Problem: To study the language output during one day of two children two and one-half years of age.

Method: All the words occurring in one day were recorded.

Findings: The two children used 9290 and 8992 words, respectively; of these, 751 and 629, respectively, were different words. Of the 751 different words used by the one child, a boy, 64 percent were used in the first five hours of the day.

47. Gale, M. C., and Gale, H. "The vocabularies of three children in one family at two and three years of age." *Ped. Sem.*, 9 : 1902, 422-435.

Problem: To study the vocabularies of three children, two at 2 years and one at 3 years of age.

Method: A month preceding the second and third birthdays, all the words used were recorded.

Findings: The two girls at the age of 2 years had vocabularies of 614 and 578 words, respectively. The boy had a vocabulary of 115 words at this age. The children's vocabularies nearly doubled during the third year.

48. Gerbach, F. M. *Vocabulary Studies. Studies in Education and Psychology. No. 1.* Colorado College, 1917, 123 pp.

Problem: To study existing vocabulary studies.

Method: A summary was made of the literature.

Findings: Nineteen vocabulary studies on subjects ranging from 7.5 months to 5 years of age were presented in tabular form.

Authority	*Age of child*	*Vocabulary*
Whipple	7.5 months	1
Hills	8 months	6
Tracy	9 months	9
Whipple	11.5 months	4
Tracy	1 year	4
Tracy	1 year	8
Tracy	1 year	10
Whipple	1 year	15
Beyer	1 year	20
Jegi	1 year 4 months	75
Jegi	2 years	1227
Gale	3 years	1176
Nice	3 years	1205
Whipple	3 years	1771
Brandenburg	3 years	2282
Mateer	4 years	1020
Nice	4 years	1870
Doran	5 years	1400
Langenbeek	5 years	6837

49. Gesell, A. *The Mental Growth of the Preschool Child: A Psychological Outline of Normal Development from Birth to the Sixth Year, Including a System of Developmental Diagnosis.* New York: Macmillan, 1925. 447 pp. (pp. 89-99).

Problem: To establish norms of language development.

Method: The author describes his method of approach as the "clinical and natural history type." The psychological examination was supplemented by an analytical interview and observation in an effort to define specific behavior items that were both characteristic and distinctive of the various age levels. Ratings on behavior items are always given in month and letter values. The month precedes the rating letter. The rating A represents from 20 to 49 percent of the subjects; B+ from 50 to 64 percent; B from 65 to 84 percent; and C from 85 to 100 percent.

Findings: (1) The author reported various normative values for the nine, twelve, fifteen, eighteen, twenty-four, thirty-six, forty-eight, and sixty-month age levels for items such as the following under the heading "Vocabulary": (*a*) vocalization, (*b*) use of words, (*c*) picture naming, (*d*) pointing to pictures, (*e*) naming of objects, (*f*) defining by use, (*g*) word tests, (*h*) comprehension test, (*i*) obeying prepositions. Under the heading "Conversation," various behavior values were reported for the eighteen, twenty-four, thirty-six, forty-eight, and sixty-month age levels for such items as: (*a*) naming objects in pictures, (*b*) uses descriptive words, (*c*) describes picture, (*d*) interprets humor. Under "Reproduction" the author reported various normative values for the twelve, eighteen, twenty-four, thirty-six, forty-eight, and sixty-month levels, such as the following: (*a*) repeats things said, (*b*) repeats digits, (*c*) repeats syllables, (*d*) articulation test.

50. Gesell, A. *The Mental Growth of the Preschool Child: A Psychological Outline of Normal Development from Birth to the Sixth Year, Including a System of Developmental Diagnosis.* New York: Macmillan, 1925. 447 pp. (pp. 213-217).

Problem: To study the vocal activities of a six-months-old child.

Method: All the vocal activities for a twenty-four-hour period were recorded.

Findings: At 6 months, 3 percent of the waking time was expended in some form of speech or language activity; at 9 months 6.66 percent. The most recurring sound at 6 months was *da,* with a frequency of 63. The next in order was *ba,* with a frequency of 30. *Ngr* occurred 21 times. One hundred and four separate moments of vocalization were recorded, varying in complexity from a one-letter sound to paired syllables repeated thirteen times. Seventy-five sounds and combinations of sounds were used.

51. Gesell, A. *The Mental Growth of the Preschool Child: A Psychological Outline of Normal Development from Birth to the Sixth Year, Including a System of Developmental Diagnosis.* New York: Macmillan, 1925. 447 pp. (pp. 217-220).

Problem: To study the acquisition of vocabulary at 12 and 18 months of age.

Method: A tabular summary of the words reported by fifty mothers of normative twelve-months-old and eighteen-months-old babies.

Findings: At 12 months the most popular words are *mama* or *papa, bye-bye,* and *baby.* At 18 months this vocabulary list has expanded in a significant manner. *Bye-bye* is again in the lead, with other salutations like *ta-ta, hello,* and *how-do-you-do* scoring high.

52. Gesell, A. *The Mental Growth of the Preschool Child: A Psychological Outline of Normal Development from Birth to the Sixth Year, Including a System of Developmental Diagnois.* New York: Macmillan, 1925. 447 pp. (pp. 220-221).

Problem: To study the language ability at 2 years.

Method: A study was made of fifty representative two-year-old children of American parentage reared in English-speaking homes.

Findings: With regard to the correct use of the pronouns *I, you,* and *me,* it was found that 48 percent used the three appropriately, 6 percent used two, and 8 percent one; 38 percent used none appropriately. Fifty-four percent used *you* and 58 percent used *me.* Plural forms were used correctly by 42 percent, past tenses by 40 percent, both by 36 percent; 54 percent used neither correctly. Mere words rather than sentences were used by 40 percent.

53. Gesell, A. *Infancy and Human Growth.* New York: Macmillan, 1928. xvii + 418 pp. (pp. 128-139).

Problem: To establish a developmental schedule with approximate normative values for language development.

Method: A revised scale of normative items for the different aspects of development, including language, based on clinical examinations in a guidance nursery of work with 90 subjects, from 1 to 30 months of age, and a total of 429 examinations. Each child was seen, on the average, four times. The author states: "It must be emphasized that serious use of the schedule in its present form presumes a large amount of clinical familiarity with infants of every age."

Findings: The following behavior items are given for language: At 1 month the baby gives definite heed to sound and has differential cries for discomfort, pain, and hunger. At 2 months the baby attends to the speaking voice, makes a facial response to a social approach, and vocalizes several sounds. At 3 months the baby has a responsive smile to social approach and vocal expressions of pleasure. At 4 months the

baby laughs aloud, responds vocally when socially stimulated, and vocalizes in self-initiated play. At 5 months the baby turns his head at the sound of the voice or a hand bell, gives vocal expression of eagerness, and displays displeasure on withdrawal of a coveted object. At 6 months the baby reaches for an object. Upon seeing it, he picks up a cube from the table and looks at a pellet on table surface. At 7 months the baby vocalizes satisfaction in attaining an object. At 8 months the baby gives vocal expression to recognition and vocalizes in an interjectional manner. At 9 months the baby can say *da-da* or its equivalent and listen with selective interest to familiar words. At 10 months the baby makes incipient or rudimentary imitation of sounds and conditioned adjustment to certain words. At 12 months the baby has a vocabulary of two words, carries out a simple verbal commission, and places a cube in or over a cup at command. At 15 months the child's vocabulary has increased to four words and the child uses an expressive jargon. At 18 months the normal child says five or more words, uses jargon conversationally, and points to the nose, eyes, and hair. At 21 months the child joins two words, can name one picture, and repeats things said. At 24 months the child names three of five objects, indicates five objects on a card, and combines words. At 30 months the child names five pictures and indicates seven pictures.

54. Gesell, A., and Lord, E. "A psychological comparison of nursery-school children from homes of low and high economic status." *Ped. Sem.*, 35: 1927, 339-356.

Problem: To make a psychological comparison of nursery-school children from homes of low and high economic status.

Method: Eleven children from homes of high, and eleven from homes of low, economic status were paired and studied by the clinical method; 330 clinical measurements and estimates were made on fifteen different items. The following items dealing with language were studied: *vocabulary*—pointing to objects, naming objects and pictures, defining five and eight words in the Binet series; *conversation*—language used in reacting to Binet pictures; *information*—naming parts of body, sex, age, colors, right and left hands, days of week; *spontaneity of speech*—observed in relation to child's initial adjustment to the situation, and his spontaneous comments during the course of the examination.

Findings: Restraint and inhibition in spontaneous speech were found to be more prevalent among children from homes of low economic status than among children from homes of high economic status. The most outstanding difference in the two groups was in the greater amount of conversation in the children from homes of high economic status.

55. Grant, J. R. "A child's vocabulary and its growth." *Ped. Sem.*, 22: 1915, 183-203.

Problem: To study the growth of a child's vocabulary.

Method: From the time E began to talk, her words were taken down daily. E was tested on words she had not used by checking the lists of published vocabularies.

Findings: At 12 months E had a vocabulary of three words. A tabulary summary of the acquisition of vocabulary from month to month is given. The writer summarizes previous investigations.

56. Greenwood, C. M. "Children's vocabularies." *Seventeenth Annual Report, Kansas City Public Schools,* 1888, 52-65.

57. Guillaume, P. "Les débuts de la phrase dans le langage de l'enfant." *Jour. de psychol.,* 24: 1927, 1-25.

Problem: To study the origin of the sentence in the language of the child.

Method: The author made observations on his child.

Findings: (1) The child understood simple commands at 8 months. (2) The one-word sentence is an undifferentiated word, and cannot be classed into any one part of speech. It may be used as a noun, a gesture forming the verb, or the word may designate the act, a gesture designating the subject. (3) The child's early words are always simplifications of the adult word. (4) The next stage is two "one-word sentences" joined together to express one idea. (5) At the beginning of the second year, true sentences occur. They usually involve the name of a person and an act or the expression of a wish or desire. (6) Vocabulary begins to increase rapidly when the child discovers that everything has a name. P used 6 nouns referring to objects at 12 months, 10 days; 11 at 13 months, 27 days; 19 at 14 months, 3 days; 26 at 15 months, 30 days; 38 at 16 months; 68 at 18 months, 6 days; 79 at 18 months, 27 days; 118 at 20 months, 17 days, and 168 at 21 months, 15 days.

58. Hall, G. S. "Notes on the study of infants." *Ped. Sem.,* 1: 1891, 127-138.

Problem: To study the development of an infant.

Method: Random notes were taken in regard to the child's development.

Findings: Sixty-three variations in vocal expressions were recorded before he was 6 months old. Forty variations were recorded in a single morning. Black was known during the thirteenth month.

59. Hall, Mrs. W. S. "The first five hundred days of a child's life. V." *Child Study Mo.,* 2: 1896-1897, 586-608.

Problem: To study the development of a child during the first five hundred days of a child's life.

Method: A record was kept of the child's development.

Findings: As early as the sixth week pleasure was expressed by laughing. By the ninth week the hunger, pain, impatience, and appeal cries could be recognized. No evidence was given before the eighteenth

week that the child understood words. On the 223rd day the baby uttered his first word. The first sentence appeared on the 388th day. The first six words articulated were words in which the syllable was doubled, as *bye-bye*. Previous to the fourteenth month, terminal consonants were for the most part ignored. The difficulty of pronouncing words beginning with a vowel was avoided by preceding the vowel by the consonant which followed it. Charts are given showing the introduction and use of elementary sounds. The child had 3 words at 10 months, 12 at 11 months, 24 at 12 months, 38 at 13 months, 58 at 14 months, 106 at 15 months, 199 at 16 months, and 232 at 17 months.

60. Heilig, M. "A child's vocabulary." *Ped Sem.*, 20: 1913, 1-16.

Problem: To study the acquisition of words by a child between the second and third birthdays.

Method: A record was kept beginning a month before her second birthday of all the words used until her third birthday. Past tense and participial forms were counted as separate words.

Findings: The child's vocabulary at 2 years of age consisted of 455 words. The vocabulary at 3 years of age consisted of 2153 words. At the age of 3 years, black, blue, brown, gray, green, orange, pink, red, tan, white, and yellow were known.

61. Hills, E. C. "The speech of a child two years of age." *Dialect Notes*, 4: 1914, 84-100.

Problem: To study the vocabulary and phonology of a child 2 years of age.

Method: Observations were begun on her second birthday and continued for ten days.

Findings: During the ten-day observation period, the child used 321 words. The vocabulary consisted of 9 proper nouns, 173 common nouns, 4 personal pronouns, 26 limiting adjectives, 23 descriptive adjectives, 59 verbs, 11 adverbs, 1 conjunction, 8 prepositions, and 7 exclamations, 228 of which consisted of one syllable. Her imitation of vowels was nearly perfect, but she did not pronounce well or at all a considerable proportion of the consonants. Only nine initial consonants were used. The range of medial and final consonants was somewhat larger. Nouns and pronouns had no genitive or plural forms, with two exceptions. Both indicative and imperative sentences were used.

62. Holmes, U. T. "The phonology of an English child." *Amer. Speech*, 2: 1926-1927, 219-225.

Problem: To record and study the speech of a child from her first attempts up to the twenty-fifth month.

Method: To record the progressive development of speech sounds by using the symbols of the International Phonetic Association in transcribing words and phrases, and to obtain a complete record for

the first twenty-one months of the child's life and a summary of the sounds used by the child up to the age of twenty-five months.

Findings: The first word occurred at the age of one year, although a word was imitated unintelligibly at the age of 7 months. At 18 months there were no intervocalic consonants. The few two-syllable words which existed were treated as two words with a distinct break between syllables. Final *k* was definitely used, although *g* did not exist. English *r* occurred once. No other consonants were present.

63. Holden, E. S. "On the vocabularies of children under two years." *Trans. Amer. Philol. Assn.*, 8: 1877, 58-68.

Problem: To study the vocabularies of two children under 2 years of age.

Method: All the words used during the twenty-fourth month were recorded.

Findings: The boy had a vocabulary of 173 words, and the girl a vocabulary of 399 words.

64. Horn, E. "The vocabulary of children up to and including first grade." *National Society for the Study of Education, Twenty-fourth Yearbook, Part I.* Bloomington, Ill.: Public School Publishing Co., 1925. 356 pp. (pp. 185-199).

Problem: To combine the common words from three investigations.

Method: These investigations were: (1) A summary of the literature of the spoken vocabulary of 80 children varying in age from 1 to 6 years; (2) M. D. Horn's study of approximately 500,000 words of kindergarten vocabulary; (3) P. C. Packer's tabulation of 70,000 running words of the spoken vocabulary of first-grade children.

All words occurring in the three investigations with a total freuency of 15 or more, or in two of the three with a total frequency of 25 were tabulated.

Findings: A list of the 1300 commonest words was obtained.

65. Horn, M. D. "Sectional differences in the vocabulary of kindergarten children." *Childhood Educ.*, 3: 1926-1927, 180-182.

Problem: To study the sectional differences in the vocabularies of kindergarten children.

Method: The 489,555 running words recorded as occurring in directed and undirected lessons in kindergartens throughout the United States were tabulated according to sections of the country—West, Middle West, South, and East.

Findings: Few sectional differences were found. These differences were too small to necessitate special consideration of these words in the kindergarten course of study.

66. Horn, M. D. "The thousand and three words most frequently used by kindergarten children." *Childhood Educ.*, 3: 1926-1927, 118-122.

Problem: To study the vocabularies of kindergarten children in directed and undirected lessons and to determine the 1000 words most frequently used.

Method: The 489,555 running words recorded as occurring in directed and undirected lessons in kindergartens throughout the United States were studied as to frequency.

Findings: I was the word of the greatest frequency. A list of 1003 words instead of 1000 is given because the last four words had the same frequency.

67. Horn, M. D. "Is the kindergarten child's vocabulary larger in directed or undirected lessons?" *Childhood Educ.*, 3: 1926-1927, 230-231.

Problem: To determine whether the kindergarten child's vocabulary is larger in directed or undirected lessons.

Method: The 489,555 running words recorded as occurring in directed and undirected lessons in kindergartens throughout the United States were studied.

Findings: The results of this study seem to show that increase in vocabulary is about as rapid in undirected lessons as in the lessons directed by the teacher.

68. Horn, M. D. *An Investigation of the Vocabulary of Kindergarten Children.* Unpublished master's thesis in the College of Education, State University of Iowa, 1927. Pp. 96.

Problem: To study the vocabulary of kindergarten children.

Method: Requests were sent to kindergartens all over the country for records of directed and undirected lessons. After tabulation, the words of the lessons were arranged in the descending order of frequency according to sections of the country and according to occurrence in directed or undirected lessons.

Findings: A total of 489,555 running words was obtained, from which the 1003 most commonly used were selected. It was tentatively concluded that the sectional differences in the vocabularies of children attending kindergarten are few and the few differences are not crucial. Few differences in the vocabulary of the directed and undirected lessons were found.

69. Hull, C. L., and Hull, B. I. "Parallel learning curves of an infant in vocabulary and in voluntary control of the bladder." *Ped. Sem.*, 26: 1919, 272-283.

Problem: To study the progress of a young child in securing voluntary control of the bladder and the acquisition of spoken vocabulary.

Method: All the new words used up to two years were recorded by calendar months.

Findings: The child's first real words were spoken at 17 months. Her vocabulary consisted of 129 words at 2 years, and 500 words at 28 months. At the latter date she had a reading vocabulary of 20 words; at 3 years her reading vocabulary was 70 words. The difficult early stages of talking coincide exactly with a plateau in the learning curve in voluntary control of the bladder. It seems that learning to talk interfered with the voluntary control of the bladder.

70. Humphreys, M. W. "A contribution to infantile linguistics." *Trans. Amer. Philol. Assn.*, 11: 1880, 5-17.

Problem: To study the vocabulary and pronunciation of a two-year-old child.

Method: When the child was 2 years old, the words that the child's father was sure the child had used and could still use were marked in a dictionary. Whenever there was doubt, the child was induced to use the word by a question. A table representing the child's pronunciation from 18 months to 2 years is presented.

Findings: Four features were observed in the child's linguistic efforts. (1) At the age of four months she exhibited a curious and amusing mimicry of adult conversation. (2) At eight months she knew by name every person in the house. (3) At 11 months she would imitate with accuracy any sound given her. (4) Finally she began to drop her mimicry of language and to acquire real words with the ordinary infant pronunciation.

71. Jegi, J. I. "The vocabulary of a two-year-old child." *Child Study Mo.*, 6: 1901, 241-261.

Problem: To study the vocabulary of a two-year-old child.

Method: A few minutes' conversation with the child was held each day during a three weeks' period. All words and expressions were recorded immediately after being used.

Findings: The total vocabulary consisted of 1212 common words and 82 proper names.

72. Johnson, H. M. *Children in the Nursery School.* New York: John Day Co., 1928. xx + 325 pp.

Problem: To study the young child's language in relation to the environment.

Method: Records of the spontaneous conversations of young children under 3 years of age, not only as individuals but as members of the group in the nursery school.

Findings: Several significant elements in language development are noted. (1) The child most frequently used his vocal equipment when he was engaged in motor activities. The sounds might be shouts, grunts, squeals, roars, or words that were characteristic language responses to

the situation in hand and did not usually occur unassociated with full body activities. (2) A characteristic feature of speech reaction was a tendency to markedly rhythmic terms, in syllables or words that have a regular beat or cadence. (3) The phrases used were brief and repeated again and again. (4) A definite elation and satisfaction came from using the vocal equipment in new and varied ways. (5) The questions of young children were in a large measure not for the purpose of eliciting information, but for the sake of establishing social contact. (6) The child dealt mainly with his own activities and experiences in his conversations. (7) Language reactions and body activities seem rhythmically related.

73. Kenyeres, E. "Les premiers mots de l'enfant et l'apparition des espèces de mots dans son langage." *Arch. de psychol.*, 20: 1927, 191-218.

Problem: To study the appearance of the various kinds of words in the language of the child.

Method: The father kept a journal in which he recorded observations on the child's development, beginning at birth.

Findings: Before she was 2 years old, the child produced correctly all the sounds in her language. The first words designated actions, things, qualities. The child used certain grammatical forms before knowing their significance. At 3 years, 8 months, her vocabulary contained 2655 words as determined by Descoeudres' partial language tests.

74. Kirkpatrick, E. A. *Fundamentals of Child Study: A Discussion of Instincts and Other Factors in Human Development with Practical Applications.* New York: Macmillan, [c. 1916]. 383 pp. (pp. 233-237).

Problem: To study the sentences used by a child between the ages of 2 and 4 years.

Method: Records of all sentences used during an hour or more by the child were taken at regular intervals.

Findings: A marked increase in completeness, length, and complexity of sentences was found with increase in age. Most of the child's first sentences had no subject; many were without an assertive verb; only a few were without an object. The length of the sentence was doubled in a few months, and complex and compound sentences appeared and increased in number.

75. Kuhlmann, F. *A Handbook of Mental Tests: A Further Revision and Extension of the Binet-Simon Scale.* Baltimore: Warwick and York, 1922. 208 pp. (pp. 89-90, 92).

Problem: To standardize a revision and extension of the Binet-Simon scale.

Method: Two thousand children were used in standardizing the scale, in which six linguistic tests appear. (1) At 12 months the spon-

taneous vocalizations of the child, their character, and the number of syllables that are combined are noted. (2) At 18 months the baby is, if possible, induced to repeat "mama, papa, yes, no, cat, man." The test is considered passed if the child unmistakably uses some words or understands a question without a gesture. (3) At 2 years the child is tested as to his ability to point out five of eight pictures in response to a question and to obey simple commands. (4) At 3 years the child is to enumerate at least three things appearing in any one of three pictures, to point to various parts of the body, to repeat a six-syllable sentence, to name four of six familiar objects, to repeat two numerals, and to recall a picture correctly. (5) At 4 years the child is to give sex, repeat three numerals, and name pictures from memory. (6) At 5 years the child is asked to count four pennies, repeat a ten-word sentence, define by use, and name four colors.

76. Langenbeck, M. "A study of a five-year-old child." *Ped. Sem.*, 22: 1915, 65-88.

Problem: To study the language of a superior five-year-old child.

Method: During the six months previous to the child's fifth birthday, all she said was recorded.

Findings: At 16 months the child had a vocabulary of 299 words. At 5 years the child had a vocabulary of 6837 words, consisting of 56 percent nouns, 21 percent adjectives and adverbs, and 19 percent verbs. The total number of coined words was 23. The vocabulary contained 117 color terms, 73 form terms, 107 tactual terms, 31 taste and smell terms, and 158 sound terms.

77. Lukens, H. T. "Preliminary report on the learning of languages." *Ped. Sem.*, 3: 1895-1896, 424-460.

Problem: To study the stages in learning a language.

Method: Observations on the author's children, two girls and a boy, and study of examples in literature in regard to both vocabulary and speech.

Findings: The author gives a table of mispronounced initial sounds from the second to fourth year. The prominent part played by *t* is strongly brought out in the table. The only other sound that has such a wide and vicarious use is *h*. A little child's normal mispronunciation is an indistinctness or vagueness, rather than a substitution of a wrong sound for a right one. In the latter part of the first year or the first part of the second year, children often use single words to express their thoughts. The striking and accented parts of a sentence appear in the child's language first.

78. Magni, J. A. "Vocabularies." *Ped. Sem.*, 26: 1919, 209-233.

Problem: To study the vocabularies of individuals of various ages.

Method: Summary of the literature, mainly on school children.

Findings: Published vocabularies of children from 1 to 6 years of age summarized. In early infancy girls use more words than boys.

79. Major, D. R. *First Steps in Mental Growth: A Series of Studies in the Psychology of Infancy.* New York: Macmillan, 1906. 360 pp. (pp. 317-333).

Problem: To study the first step in language.

Method: Observations on the development of the author's child during his second and third years.

Findings: In the fifty-first week the child made his first association between a word and an object. In the first month of the second year babbling was in full sway. In the tenth month the child would imitate words he heard. Early in the second year he would make an appropriate motor response to a command. Following fast upon the 'sentence-sound' comes the 'sentence-word,' a single word used to name things perceived or things wanted. The last month of the second year the child combined two words to form his first sentence. His first use of *no* was in the twenty-fifth month. In the twenty-sixth month he gave words an extended application. In the thirty-sixth month his sentence consisted of five or six words. The latter part of the thirty-third month, the first question appeared. At the end of the second year the child had a vocabulary of 143 words; from the twenty-fifth to thirtieth month, 308 words; and from the thirty-first to thirty-sixth month, 564 words. The child's pronunciation of 62 words is traced from the thirteenth to the thirty-sixth month.

80. Maknen, G. H. "Retarded development of speech in young children." *Pa. Med. J.*, 8: 1905, 579-582.

81. Mateer, F. "The vocabulary of a four-year-old boy." *Ped. Sem.*, 15: 1908, 63-74.

Problem: To study the vocabulary of a four-year-old boy.

Method: The spontaneous vocabulary of a boy 4 years of age was recorded over a period of ten weeks.

Findings: A total vocabulary of 1020 words was recorded, of which 55 percent were nouns, 22 percent verbs, 14 percent adjectives, 4 percent adverbs, and 2 percent pronouns.

82. Mead, C.D. "The age of walking and talking in relation to general intelligence." *Ped. Sem.*, 20: 1913, 460-484. (Also Teachers College, Columbia University, Contr. to Educ., No. 76. New York, 1916. 117 pp.)

Problem: To study the relation between intelligence and age of walking and talking.

Method: The case histories of 25 normal boys and an equal number of normal girls, and of 84 feebleminded boys and 60 feebleminded girls, were examined.

Findings: The median age for walking for normal boys was 13.875 months and for talking 16.5 months; the median age for walking for normal girls was 13.21 months and for talking 15.5 months. Feeble-minded boys began to walk at 22.2 months and to talk at 35.7 months; feebleminded girls walked at 20.7 months and talked at 30 months.

83. Meek, L. H. *A Study of Learning and Retention in Young Children.* Teachers College, Columbia University, Contr. to Educ., No. 164. New York, 1925. 96 pp.

Problem: The purpose of this research was to study the effects of certain selected factors upon the learning of young children in connection with reading. These factors were: (1) varying amounts of initial practice; (2) varying amounts of later practice; and (3) similarity of associated words.

Method: Six words were selected to be taught: *ball, flag, doll, lion, duck, rose.* For each word taught, five other words were selected to act as confusing words in the total learning situation. Each of these five words was similar to the associated word to be taught, either in initial letter, final letter, first two letters, final two letters, or middle two letters. The printed words were pasted on the top of boxes containing toys. Different arrangements were provided. Seventy-one children, aged 4, 5, and 6 years, were examined. The cues used by the children in recognizing the words were analyzed.

Findings: Additional practice aided retention, but a large number of recognitions at one time did not bring efficient results with these children. In no case was there total forgetting at any period. Correlations with mental age were small, but increased with chronological age. The children deliberately or accidently hit upon certain letters or groups of letters as means of identification of words. The last two letters were more often used as cues than the first two or middle two letters. The initial letter was more often used as a cue than the final letter. Certain letters or groups of letters having a peculiar formation seemed to be selected as cues. In general, the cue selected seemed to be dependent on the total situation set up. The characteristic distinguishing the word from the others in its group was chosen as a cue.

84. Mickens, C. W. "Practical results of child study." *Child Study Mo.*, 3: 1897-1898, 198-205.

Problem: To study the child's development up to and including the twenty-seventh month.

Findings: During the eighth month the child imitated sounds readily. The first word was used during the eleventh month. Previous to the age of fourteen months, her vocabulary consisted of 3 words. The increase in vocabulary from the fourteenth to the twenty-seventh month was as follows: fourteenth month, 15 words; fifteenth month, 27 words; sixteenth month, 44 words; seventeenth month, 77 words; eighteenth month, 116 words; nineteenth month, 142 words; twenty-

first month, 211 words; twenty-fifth month, 507 words; twenty-seventh month, 675 words.

85. Moore, K. "The mental development of a child." *Psychol. Monog.*, 1 (No. 3) : 1895, 150 pp. (pp. 115-120).

Problem: To study the mental development of a child.

Method: Continuous observations of the child's development were recorded.

Findings: The first sound the child made was the short expiratory *a*, uttered only in crying. At the close of the fourth month he was capable of making all the sounds in the language. The sounds used between the twelfth and fortieth weeks are given. In the fortieth week he knew the word *papa*. Though so many sounds were uttered with fluency during the month which preceded the acquiring of language, not a word of those which formed the first vocabulary, with the single exception of *mamma*, was phonetically in exact reproduction of the word copy. Sounds were omitted, introduced, added, and substituted: a variety of substitutes were used for each sound. In the forty-second week conscious but unintelligent imitation of words became habitual. The first verb made its appearance in the sixty-fourth week. From the fifty-eighth to the eighty-fourth week all words were given an extended application. The first sentence was used during the sixty-sixth week. During the eighty-second week the child began inventing names for new objects. During the early part of the second year the child used sentences averaging 3.02 words in length; toward the end of the year they averaged 4.05 words. In the first part of the year one-third of the sentences contained no verb; at the end of the year only 7.2 percent. At the close of the second year the child had a vocabulary of 475 words, of which 62 percent were nouns.

86. Morrison, C. E. "Speech defects in young children." *Psychol. Clin.*, 8 : 1914-1915, 138-142.

Problem: To study speech defects in young children.

Method: An examination and analysis of the speech habits of 218 children, from 5 to 7 years of age, in four kindergarten and primary classes. A list of nearly 100 words containing all the common combinations of the consonant sounds, both as initial and final elements in syllabic formations, was chosen. Pictures were selected and arranged in such a way that either the picture itself or a question in regard to it would call forth from the child a response using the sound or combinations of sounds to be tested. Each child was removed from the class and tested alone. A second test consisted of pronouncing to the children the words they had missed.

Findings: Forty-nine percent did not give the sound *th* correctly. From the point of view of speech defect, this was not considered important. Eliminating children who failed to pronounce *th* correctly,

only 12.8 percent, or 28 children, showed marked defects of articulation. Incorrect habits were evident most often in the use of *ch* as in *chair, k* or hard *c, l, r, s,* and *sh.* The incorrect sounds used by any one child ranged from one to ten. Two of the children with marked defects received a high ranking as to mental ability in the teacher's rankings, two were ranked bright, six as average, fifteen as dull or slow, and two as border-line. Practically none of the sounds were corrected from hearing a correct sample. Instruction was given to the 28 children individually and to the *th* group in groups. At the end of three weeks' training, all but four were able to give the sounds correctly.

87. Nice, M. M. "The development of a child's vocabulary in relation to environment." *Ped. Sem.*, 22: 1915, 35-64.

Problem: To study the influence of environment on the development of a child's vocabulary.

Method: A vocabulary was obtained by keeping a record of all the words used up to the eighteenth month, during the month preceding her third birthday, and from the forty-third month to the forty-eighth month. A detailed account is given of the child's environment. The words are recorded under the various aspects of environment and according to the parts of speech.

Findings: The child said her first word in her fourteenth month. The first sentence consisting of two words occurred in the eighteenth month; in the twenty-first month her sentences were four or five words in length. Personal pronouns first appeared during the twenty-second month. At 18 months her vocabulary consisted of 145 words; at 3 years it contained 1205 words; and at four years it contained 1870. She knew five or six colors when somewhat over 2 years of age; at 3 she knew eleven names of colors and four related words; and at 4 she knew sixteen names of colors and six related words. At 3, she used ten nouns denoting time; when she was 4, she had more than doubled this number, having a total of 25. She had no adequate idea of number beyond 2 until she was nearly four years of age. Her vocabulary was full of terms applying to the outdoors.

88. Nice, M. M. "Speech of a left-handed child." *Psychol. Clin.*, 9: 1915-1916, 115-117.

Problem: To study the speech of a left-handed preschool child.

Method: Case study method of a child from 3 years, 4 months, of age, to 3 years, 9 months, and again a year later.

Findings: Until the age of 2 she was prevented from using her left hand. When she entered nursery school her speech was so imperfect as to be almost not understandable. The child's speech was almost entirely made up of vowels. When 3 years and 6 months old, she suddenly began to improve. When she was 4 years and 6 months old, she spoke almost as well as the average child of her age. She had seemingly reached the stage when the disturbing influence was overcome.

89. Nice, M. M. "The speech development of a child from eighteen months to six years." *Ped. Sem.*, 24: 1917, 204-243.

Problem: To study the speech development of a child from 18 months to 6 years.

Method: A record was made of all words used up to the eighteenth month. Records also were made one month before the third birthday, three months before her fourth birthday, and one month before and one month after the fifth and sixth birthdays.

Findings: At 18 months the child's vocabulary contained 133 words; at 3 years 1139; at 4 years 1765; at 5 years 2502; and at 6 years 3075 words. Nouns appeared at 14 months, verbs and adverbs at 16 months, interjections and adjectives at 17 months, pronouns at 22 months, prepositions and conjunctions shortly after she was 2 years old. She said *no* at 16 months and *yes* at 20.

90. Nice, M. M. "Ambidexterity and delayed speech development." *Ped. Sem.*, 25: 1918, 141-162.

Problem: To study cases of delayed speech with special reference to "handedness."

Method: Case study method.

Findings: Criterion for normal speech development set up: (1) the first word by 15 months; (2) a vocabulary of 200 words at 2 years of age, with the beginning of the use of sentences; and (3) at 3 years of age a vocabulary of 600 words representing all the parts of speech.

91. Nice, M. M. "Concerning all-day conversations." *Ped. Sem.*, 27: 1920, 166-177.

Problem: To study the conversation of a four-year-old child during one day.

Method: Everything the child said during the day was recorded.

Findings: She had a vocabulary of 1135 words. The child used 5519 words in the six morning hours and 4999 in the seven afternoon hours. She used 2686 sentences consisting, on the average, of 3.9 words. She asked 300 questions, or an average of 23 an hour.

92. Nice, M. M. "The speech development of a little girl." *Proceedings Oklahoma Academy of Science*, 4: 1925, 147-168.

93. Nice, M. M. "Length of sentence as a criterion of a child's progress in speech." *Jour. Educ. Psychol.*, 16: 1925, 370-379.

Problem: To summarize the available material, including a study of her own children, on length of sentence as a criterion of a child's progress in speech.

Method: Observation and a review of literature.

Findings: Speech development is divided into four stages, dependent on the sentence: (*a*) single words; (*b*) early sentences; (*c*)

the short sentence of three to four words; (*d*) the complete sentence of from six to eight words. Practically all children begin to talk with single words; this stage lasts from four to nine months. In their first sentences children do not inflect verbs and they omit the less essential words. They also use an excess of nouns. From 20 to 60 percent of their sentences are incomplete. The age at which the first sentence appears varies from 13 to 27 months, the average being 17.5 months. The complete sentence of six to eight words is characteristic of the speech of the more advanced children of 3 years of age.

94. Nice, M. M. "On the size of vocabularies." *Amer. Speech,* 2: 1926-1927, 1-7.

Problem: To obtain information as to the size of vocabularies at the various age levels.

Method: Summary of previous vocabulary studies.

Findings: The 28 vocabularies at one year vary from 1 to 24 words, with an average of 7. The 53 vocabularies at 18 months vary from 1 to 523 words, averaging 71. The vocabularies at 2 years range from 5 to 1212 words, averaging 328. The 11 vocabularies at 30 months vary from 30 to 1509 words, with an average of 690. At the age of one year a great many children have not begun to talk at all, while some have not done so at 18 months. A table of vocabularies of children from 3 to 7 years old, including French and German children, is given.

95. Nice, M. M. "The vocabularies of a child from fifteen months to three years." *Proceedings Oklahoma Academy of Science,* 6: 1927.

96. Oatman, M. E. "A boy's development at eighteen months." *Ped. Sem.,* 28: 1921, 52-59.

Problem: To study the general development of an eighteen-months-old boy.

Method: An observational study.

Findings: His vocabulary consisted of 110 words. His first sentence occurred early in the eighteenth month.

97. Oatman, B., and Oatman, M. E. "Further notes on eighteen months' vocabularies." *Proceedings Oklahoma Academy of Science,* 2: 1922, 106-108.

98. Oatman, B. "A comparison of the size of the vocabularies of five children of the same ages." *Proceedings Oklahoma Academy of Science,* 3: 1923, 151-155.

99. O'Shea, M. V. *Linguistic Development and Education.* New York: Macmillan, 1907. 347 pp. (pp. 39-85).

Problem: To study the language development of the child.

Method: The observational method was used. The author's children were subjects.

Findings: At 11 months K could use several words resembling the conventional forms of her parents; that is, *ha* for *hat.* At this time words were given an extended application. Before the completion of the second year, and as early as the eighteenth month, the child begins to express himself in elliptical sentences. At 25 months K could use sentences of two or three words, but omitted the verb frequently. The first preposition in H's language appeared at 19 months. The children used *my,* before *I.* The possessive form of the noun was used after the nominative.

100. Pelsma, J. R. "A child's vocabulary and its development." *Ped. Sem.,* 17: 1910, 328-369.

Problem: To study the development of a child's vocabulary.

Method: Records were made of words as they occurred up to the second birthday and three weeks before the child's second, third, and fourth birthdays. The words known were sometimes drawn out by means of questions.

Findings: At the age of 2 years her vocabulary consisted of 379 words, 56 percent being nouns; at 3 years it consisted of 681 words, 59 percent being nouns; at 4 years it consisted of 1278 words, 56 percent being nouns; at 5 years it consisted of 1800 words. Her first color term, used at 18 months, was blue. By her twenty-fourth month she could name and recognize: blue, green, red, white, and yellow. At 48 months she knew eighteen colors. She associated with color almost daily. At 24 months, she could count to five but understood only the number relations of one, two, and three. By her third birthday she could count to fifteen and understood numbers up to four. At 4 years she could count to twenty, and her concept of number relations ended with six.

101. Perez, B. *The First Three Years of Childhood.* Chicago: A. N. Marquis and Co., 1885. 291 pp. (pp. 234-262).

Problem: To study the development of language in childhood.

Method: Observation of various children of different ages.

Findings: One child smiled at 15 days. At 3 weeks a little girl would stop crying when spoken to by the mother. At 11 months a boy observed by the author understood a great many words. The author summarizes an unpublished study of the sounds of a child. The words that a child retains most easily are those which express the most outstanding qualities of things. A little child aged 2 years, 6 months, calls all dogs *oua-oua.* A little girl at 2 years, 2 months, would jabber a string of syllables for the joy of the sound produced.

102. Piaget, J. *Le Langage et la Pensée Chez L'Enfant.* Neuchâtel and Paris: Delachaux et Niestlé, 1923. 318 pp.
Piaget, J. *The Language and Thought of the Child.* Trans. by M. Warden. New York: Harcourt, Brace, 1926. 246 pp.

Problem: To gain an insight into the mind of the child by a study of his language. A discussion of child logic more than the psychology of the child's language and thought.

Method: This study is based on the observations of the language and conversations of various children between the ages of 3 and 11 years.

Findings: The sentences of the children, as found in their spontaneous talk, can be classified into the following categories: repetition, monologue, collective monologue, adapted information, criticisms, commands, questions and answers. The child's mind is composed of two levels: the lower is the plane of subjectivity, which is the most important during the early years, and the higher is a plane of objectivity and logical ideas, the plane of reality. A distinction is made between implicit and explicit understanding on the part of the child. Children do not understand each other until the age of 7 years.

103. Pollock, F. "An infant's progress in language." *Mind*, 3: 1878, 392-401.

Problem: To study the sounds of a child from 12 to 24 months.

Method: The observational method was used.

Findings: At 12 months, *m-m* and *ba-ba* were often repeated; at 13 months *da-da* applied to the child's father. At 17 months the only vowels at the child's command were *a* as in *at*, long *a* and long *i*. Final consonants were seldom or never given, and the vocabulary was essentially monosyllabic. At 19 months *l* and final *t*, and even *p*, were pronounced more or less distinctly. The monosyllabic form still prevails. At 21 months a distinct attempt at grammatical construction was noted. At 23 months the palatals, dental aspirates, and English short *a* were still imperfect.

104. Rowe, E. C., and Rowe, H. N. "The vocabulary of a child at four and six years of age." *Ped. Sem.*, 20: 1913, 187-208.

Problem: To study the vocabulary of a child at 4 and 6 years of age.

Method: For ten weeks each, after the child's fourth and sixth birthdays, every word used was recorded. This list was supplemented by going through an abridged dictionary and listing all words known to have been used by the child but not already recorded.

Findings: The child's vocabulary at 4 years was 2346 words; at 6 years it was 3950.

105. Salisbury, A. "A child's vocabulary." *Educ. Rev.*, 7: 1894, 289-290.

Problem: To study the vocabulary of a child.

Method: During the thirty-second month and the month after the child was 5.5 years of age, the mother checked in a small dictionary each word the boy used understandingly.

Findings: The child had a vocabulary of 642 words at 32 months and a vocabulary of 1528 words at 5.5 years of age. Of these words,

883 were nouns, 22 pronouns, 321 verbs, 236 adjectives, 40 adverbs, 20 prepositions, 5 conjunctions, and 1 interjection.

106. Shinn, M. *The Biography of a Baby.* Boston: Houghton Mifflin, 1900. 247 pp. (pp. 224-230).

Problem: To study the language development of a child.

Method: Observations were recorded on the child's development beginning at birth.

Findings: At the age of 10 months the little girl was a great chatterer, pouring out strings of syllables. In the last four days of the tenth month she began to associate some of the syllables with specific situations. When approximately 11 months old, she acquired the first word. The first three words were months in process of evolution before they became real words. At 16 months the baby used the term *red* and at 17 months *yellow* and *blue.* Between the eighteenth and twenty-second months, all the colors of the spectrum were learned.

107. Smith, M. E. *An Investigation of the Development of the Sentence and the Extent of Vocabulary in Young Children.* Univ. of Iowa, Studies in Child Welfare, Vol. 3, No. 5. Iowa City, 1926. 92 pp.

Problem: To investigate the development of the sentence and the extent of vocabulary in young children.

Method: The first part of the study deals with the development of the sentence in eighty-eight children from the ages of 2 to 5 years by recording and analyzing their spontaneous conversations during an hour of free play. The second part of the study is concerned with the formation and use of a vocabulary test for children from 8 months to 6 years of age. The test secures the child's reaction by use of objects, pictures, and questions. As the test words were secured by sampling the Thorndike list, it is possible to calculate the probable total vocabulary.

Findings: The average total number of words per hour in spontaneous conversation increased with age, but there was considerable variability. Sentence length increased, incomplete sentences decreased, and identical repetition of phrases decreased with age. Declarative sentences predominated at all ages. There was a decrease with age in the proportion of simple sentences to complex and compound sentences, an increase in the number of questions, and a decrease with age in exclamatory sentences. At 2 years verbs, nouns, and adverbs were the parts of speech most frequently used; at 3, 4, and 5 years, verbs and pronouns. The ten words most frequently used were *I, is, it, you, that, do, a, this, not,* and *the.* The average vocabulary of the 273 children increased from 0 at 8 months to 2562 at 6 years. The most significant factor in increase of vocabulary is mental age. Girls are likely to begin the acquisition of vocabulary earlier than boys, but the sex differences are insignificant after 3 years of age. Children from a higher social class probably have

larger vocabularies. Order of birth does not have any significance in the size of vocabulary after 2.5 years.

108. Snyder, A. D. "Notes on the talk of a two-and-a-half-year-old boy." *Ped. Sem.*, 21: 1914, 412-424.

Problem: To study the talk of a boy aged 2.5 years.

Method: The child was observed and much of his conversation recorded from the age of 2 years, 5 months, to 2 years, 8 months.

Findings: A large proportion of the sentences were imperatives and questions. A number of complex sentences were noted, although simple sentences were the rule. The lack of organization of the notes keeps them from being particularly helpful.

109. Stern, W. *Psychology of Early Childhood up to the Sixth Year.* Trans. by A. Barwell from the 3rd edition. New York: Holt, 1924. 557 pp. (pp. 141-178).

Problem: To study the speech development of children.

Method: Observations of the author's children.

Findings: There are five stages in normal speech development. The first is the period of babble and imitation of sound forms. The second is the period of one-word sentences. The third is the period of the awakening of the consciousness of the object of speech. The vocabulary suddenly shows great increase, questions appear as to the name of things, and one-word sentences are left behind. Vocabulary contents are increased first by nouns and then by a large addition of verbs. The fourth period shows complete mastery of uninflected speech. In the fifth period the purely paralactic sentence formation is left behind.

110. Stevenson, A. "The speech of children." *Science,* 21: 1893, 118-120.

111. Stutsman, R. "Performance tests for children of preschool age." *Genet. Psychol. Monog.,* Vol. 1, No. 1, 1926. 66 pp.

Problem: To standardize a series of mental tests for the preschool child, including among others the repetition of words and word groups and answering simple questions.

Method: Five hundred and twenty-nine children, 18 to 71 months of age, were tested. The language tests included: (1) repetition of words and word groups (the child was asked to repeat a single word such as *kitty* and later to repeat a group of two to five words; the total number of words in the four groups was fourteen); (2) simple questions (ten simple questions were asked); (3) the Woodworth and Wells action-agent test, rearranged in order of difficulty.

Findings: Decile tables of scores are given. In the repetition of words and word groups only two children 30 months old failed to repeat the four words presented. The test is of value for the ages of 18 and 24 months alone. Only 36 percent of the children under 24 months re-

sponded to the word group test at all. At 24 months 8.7 percent responded, and at 30 months most of the children repeated all the words but one or two correctly, and all made at least some response. Those children whose language development was at the single-word stage repeated only single words; those children who were able to talk sentences were also able to repeat sentences.

The usual failure in response to the simple questions was silence, although some children would repeat the question or part of it. Some children would make irrelevant comments which were often obviously an attempt to dispose of the question without answering it. Others would attempt to imitate the animal referred to in the questions. Typical responses are given. At 18 months only 4 percent gave their full name; at 24 months 29 percent gave their full name, and 25 percent their first name; at 30 months 40 percent gave their full name, and 35 percent their first name.

The action-agent test was practicable for children of 30 months. Some children tended to show perseveration throughout a series of answers; some showed a wealth of associative trends, naming several objects for each question.

112. Taine, M. "The acquisition of language by children." *Mind,* 2:1877, 252-259.

Problem: To study the language development in the young child.
Method: Observations recorded continuously.

Findings: The first word was acquired at 12 months. At the age of 14 months, 3 weeks, the child had a vocabulary of eight words. During the first three and one-half months the child uttered a number of cries and exclamations including vowels only. By degrees, consonants were added to the vowels and the exclamations became more and more articulate. At 12 months, all the material for language was present. At the age of 14 months, 3 weeks, the principal words uttered were *papa, mama, tete* (nurse), *oua-oua* (dog), *koko* (chicken), *dada* (horse), *nua* (cat), *kaka* (papa), and *tem. Tem* at first had no precise meaning, but was articulated for the sake of the sound. Gradually it came to mean *give, take,* or *look.*

113. Terman, L. M. *The Measurement of Intelligence: An Explanation of and a Complete Guide for the Use of the Stanford Revision and Extension of the Binet-Simon Intelligence Scale.* Boston: Houghton Mifflin Co. [c. 1916], 362 pp. (pp. 142-174).

Problem: To revise and improve the Binet Scale.
Method: The standardization of the revision is based on 2300 subjects, including 1700 normal children.

Findings: In the Stanford revision of the Binet-Simon scale, the tests for the three-year level bearing on language development include

pointing to parts of the body, naming familiar objects, enumeration of at least three objects in pictures, giving sex, and repeating six or seven syllables. An alternative test of repeating three digits is also listed. The tests at the four-year level, involving the child's use of language to a large extent, are counting four pennies, repeating four digits, and repeating a twelve- or thirteen-syllable sentence. At the five-year level those tests dealing directly with language are naming the colors red, yellow, blue, and green, defining objects by use, and carrying out three commissions.

114. Town, C. H. "Language development in 285 idiots and imbeciles." *Psychol. Clin.*, 6: 1912-1913, 229-235.

Problem: To study the language of idiots and imbeciles for insight into the language development of the normal child.

Method: A study of the language of 285 feebleminded individuals (50 idiots, 90 low-grade imbeciles, 45 middle-grade imbeciles, and 100 high-grade imbeciles on the basis of the Binet-Simon scale.) The idiots were divided from low to high grade.

Findings: The average child of 5 years possesses certain mental capabilities plus an actively and constantly exercised power to acquire more. A feebleminded adult with the mental age of 5 possesses similar mental capabilities without the power of further acquisition.

A gradual development of the faculty of expression was found. In all three grades of idiots there were a few more children who used gestures voluntarily than there were who imitated gestures.

The rudimentary attempts at speech were evident in the highest-grade idiots. The understood vocabulary of idiots exceeded their spoken vocabulary.

With the imbecile the plane of articulate speech is reached. A gradual increase in vocabulary was found with increase in mental age. Ability to use voluntary sentences precedes that of repeating sentences.

Speech defects decrease with mental age, with the exception of stuttering.

115. Tracy, F. *Psychology of Childhood.* 4th ed. Boston: Heath, 1897. 170 pp. (pp. 140-141).

Problem: To study the development of language in a child.

Method: Observations on various children of different ages.

Findings: (1) Long before the sixth month, the primitive vowels are combined with one another and consonants to produce the first syllabic utterances. In case of boy A, the first sounds were gutteral *gg,* though the earliest combination was *mam-mam,* used in crying. (2) The second half year seems to be a period of imitation. (3) During the latter part of the second year the children used their first sentences. Before this they used sentence words and elliptical sentences. (4) One child observed used the word "I" correctly as early as the nineteenth month. (5) The published vocabularies are summarized with the fol-

lowing results: 60 percent were nouns, 20 percent verbs, 9 percent adjectives, 5 percent adverbs, 2 percent pronouns, 2 percent prepositions, 1.7 percent interjections, and .3 percent conjunctions. (6) The order of difficulty of the sounds according to observation is given.

116. Updegraff, R. *The Visual Perception of Distance in Young Children and Adults—a Comparative Study.* Unpublished Doctor's thesis. Iowa Child Welfare Research Station. State Univ. of Iowa. 1928. 119 pp. (pp. 14-17; 48-52.)

Problem: These experiments, preliminary to the main experiment, were designed to discover whether the young child's concept of distance is sufficiently developed for him to understand the three words *nearer, farther,* and *closer.*

Method: The child was asked to judge which of a pair of wooden cubes on the table in front of which he was seated was farther away from him. Seven paired distances were presented. Then the series was repeated and he was asked to point to the nearer block. Fifty-one children were tested. Two additional experiments applying the words to distances up and down, in which the examiner pointed to two objects in the room, were also used.

Findings: The words *nearer* and *farther* were in the vocabularies of all the six-year-olds and were recognized by a large majority of the four- and five-year-olds. No children 3 years or under understood the use of the two words. *Farther* was learned before *nearer.*

117. Waddle, Charles W. *An Introduction to Child Psychology.* Boston: Houghton Mifflin, 1913. 317 pp. (pp. 166-170).

Problem: To study the relative number of the various parts of speech in the vocabularies of children.

Method: Summary of the literature.

Findings: Interjectional speech is characteristic at the beginning. Nouns are acquired early in relatively large numbers. From the first year the verbal element is relatively large. The proportion of adjectives to adverbs is greater at the younger ages. Personal pronouns, relative pronouns, and subordinating and connecting words are acquired with difficulty.

118. Waddle, Charles W. *An Introduction to Child Psychology.* Boston: Houghton Mifflin Co., 1913. 317 pp. (pp. 173-174).

Problem: To study the linguistic activity of children for a single day.

Method: Summary of the literature.

Findings: The eight children reported used an average of 54 percent of their total vocabulary in a single day's conversation. The range was from 37 to 87 percent.

119. Waring, E. B. *The Relation Between Early Language Habits and Early Habits of Conduct Control.* Teachers College, Columbia University, Contr. to Educ. No. 260: New York, 1927. 125 pp.

Problem: To test the general assumption that "language habits are related to habits of conduct control," and the specific assumption that "language approval facilitates the development of a working concept of 'Right' in children from 2 to 4 years of age."

Method: Two experiments were organized. In Experiment 1 two groups of five children each were paired as to intelligence quotients and mental age and given a series of eight tests in which gross motor response was predominant, and fourteen in which discriminative responses predominated. In Experiment 2 the term "Right Good" was used instead of "Benito." The records of the same child's response to both language and non-language approval were compared on four sets of situations, including six responses in each set that involved placing together two objects which belong together by use.

Findings: Language approval was found to operate directly in the immediate situation, and indirectly in the same situation or in similar situations, both as practice and as carry-over of mind set. Language approval was found to facilitate, to expedite, to insure, and to extend conduct control. It should be most valuable in conditions which offer limited opportunity for experimentation and consequent learning by trial and success.

120. Watson, J. B. *Behaviorism.* New York: People's Institute Publishing Co., 1925. 251 pp. (p. 182).

Problem: To form a simple verbal habit in a very young infant.

Method: The child, aged six and one-half months, was given a bottle and allowed to nurse for a moment; then the bottle was taken away. When the child began to whimper and whine, the experimenter said *"da!"* and handed it back. The child, after a few times, said the sound *"da! da!"* and was immediately given the bottle. This was repeated five times.

Findings: Thereafter, when the bottle was taken away, the child immediately said *"da-da!"*

121. Watson, J. B. *Behaviorism.* New York: People's Institute Publishing Co., 1925. 251 pp. (p. 183).

Problem: To observe the language development of the child.

Method: The conditioned verbal response was employed. Child was petted and praised when he imitated his mother, who presented the two-word stimulus in saying, *"By dada."*

Findings: At the age of 1 year, 7 months, 25 days, the child had 52 words at his command and was conditioned to the use of two words on the presentation of the two-word stimulus.

122. Whipple, Dr. and Mrs. G. M. "The vocabulary of a three-year-old boy with some interpretative comments." *Ped. Sem.*, 16: 1909, 1-22.

Problem: To study the vocabulary of a three-year-old child.

Method: For ten days prior to the child's birthday all the words used were recorded. The child was induced by questions to use words that did not occur in this period which had occurred previously.

Findings: The child had a total vocabulary of 1771 words.

123. Wolfe, H. K. "Color vocabulary of children." *Nebraska Univ. Stud.*, 1: 1890, (No. 3), 205-231.

II. Research in Progress

1. Arlitt, A. H., and Busch, M. "The relative vocabularies of white and negro children two and three years old." University of Cincinnati.

The Iowa 200-word list is being used to test the relative vocabularies of 100 white and 100 negro children between the ages of 2 and 4 years. The children are equal as to social status and economic background.

2. Blanton, Margaret Gray. "The babble period."

3. Cochran, G. "The acquisition of French by young children." Iowa Child Welfare Research Station. State University of Iowa.

Problem: To determine to what extent young American-born children can acquire and use a simple French vocabulary in thirty practice periods of approximately ten minutes' duration.

Method: The words were selected on the basis of the children's interests. Each word was taught in conversation and play by the formation of several associative bonds. There was a frequent review of the old words because they were used in teaching the new ones. The subjects were 14 children, 4 and 5 years of age, in a preschool laboratory of the Iowa Child Welfare Research Station. The experiment extended over a period of three months.

Findings: The number of words recognized increased rapidly from the first lesson. The number of words recalled increased more slowly until after the sixth lesson, when increase was greater. There was a tendency to use single words or phrases rather than complete sentences. When sentences were used, they were formed after the pattern of the examiner's sentences. There was no indication that words of one part of speech were more easily learned than words of another.

A closer relationship was found between intelligence and ability to use the language than between intelligence and the ability to understand

the language. The size of the child's English vocabulary was somewhat indicative of the size of his French recognition vocabulary. A good pronunciation was acquired through imitation. The findings demonstrate the possibility that a young child may acquire and use a simple French vocabulary in daily ten-minute practice periods.

4. Cunningham, B. V. "A language scale of tests taken from Kuhlmann, Terman, Baldwin, Gesell, and Merrill-Palmer tests."

5. Gesell, A. "A clinical study of two cases of delayed speech in preschool children of normal intelligence." Yale Psycho-Clinic, Yale University.

Problem: To study two cases of delayed speech in preschool children.

Method: Detailed histories have been obtained of two girls, over 3 years of age, referred to the guidance nursery of the Yale Psycho-Clinic because of marked delay or suppression of speech. The girls have been observed and treated at the guidance nursery for more than a year. One child has attained normal speech; the other has shown slight improvement. The symptoms, personality characteristics, and causative factors in these two cases are being analyzed and compared.

6. Gesell, A. "Normative studies of language behavior in the first year of life." Yale Psycho-Clinic, Yale University.

Problem: To establish language norms for the first year of life.

Method: Records of vocalizations and listening responses are being made at the Yale Psycho-Clinic in connection with developmental examinations of infants at intervals of four weeks. This is part of a systematic investigation concerned with normative behavior characteristics and behavior increments at lunar month intervals in the first year of life. The observations include spontaneous, induced, and imitative vocalization, spontaneous and induced listening, and comprehension.

7. Institute of Child Study, University of California. "The function of language in behavior control."

Cumulative records have been made for 25 children. Incidental problems are: (1) types of language error and (2) the relationship of various criteria of language development to other growth phases of the child.

8. Institute of Child Welfare Research, Columbia University. "Intonation curves of the preschool child."

9. Iowa Child Welfare Research Station and Department of Speech, State University of Iowa. "An analysis of the speech of the preschool child."

Problem: To determine the ability of preschool children to produce the consonant elements, blends, and vowel sounds in the English language.

Method: Questions regarding pictures and toys were asked, the answers to which would contain the desired sound or sounds. The child produced the sound without auditory or visual pattern. The experimenter recorded the response in the symbols of the International Phonetic Association. Two hundred and five children between the ages of 2 and 6 years were tested on 131 sounds.

An analysis is being made of the factors that are of importance in speech development, and of the influence of physical maturity, chronological age, mental age, emotional traits, and position in family on the ability of the preschool child to produce the speech sounds of the English language.

10. Klein, J. "Psychological study in the development of sentence structure in young children." Iowa Child Welfare Research Station, State University of Iowa.

Problem: To analyze the spontaneous conversations of preschool children to study the development of the use of sentence structure and to determine whether the pattern of the child's early sentence structure is similar to primitive language.

Method: The children were observed twice in groups of two, for fifteen minutes each time. Then each child was observed within the whole group for another fifteen minutes. They were given building blocks to play with the first time, and scissors and clay the second. Their spontaneous conversation was recorded.

Findings: Very young children used sentence equivalents, consisting in most cases of one spoken word and a gesture. The period of transition from the isolated or synthetic stage to the inflective or analytical stage of speech development was very short, although the predicative sentences used were in the beginning very primitive.

11. Lorimer, Frank. "The growth of reason: a study of the rôle of language development in the evolution of the structure of mental activity." Teachers College, Columbia University.

Problem: To study the rôle of language development in the evolution of the structure of mental activity. The investigation includes, among other features, a discussion of factors affecting symbolic intelligence.

Method: The study includes (1) an analysis of the factors involved in the development of verbal activity, and their relation to preverbal types of behavior; (2) discussion of the nature of symbolism, syntax, and abstraction; and (3) application of the results to philosophical theory, especially logic and education.

12. McCarthy, D. "The language development of the preschool child with special reference to sentence formation." Unpublished doctor's dissertation. Institute of Child Welfare, University of Minnesota.

Problem: To analyze the development of the language of the child as it occurs in samples of his running conversation.

Method: A group of 140 children, 18 to 54 months of age—20 at each six-months level—was selected to give as nearly as possible a random sampling of the preschool population of Minneapolis. Fifty consecutive verbal responses were recorded for each child during home visits.

Findings: The mean length of response showed an increase with chronological age, which was more rapid at the younger age levels. A small but consistent sex difference in favor of the girls appeared at six of the seven age levels. Clear differences between occupational groups were found. Children who associated chiefly with adults showed a much greater mean length of response than those who associated with other children. The hearing of a foreign language in the home did not seem to be a serious handicap in the child's linguistic development.

The three groups of adapted information, questions, and answers showed a marked relative increase with advance in chronological age.

The proportion of nouns in the vocabulary was very large at the younger ages, and decreased with age until the age of about 30 months was reached. Corresponding to this decrease was an increase in the percentage of verbs. Large increases were noted in the proportions of adverbs and pronouns. Conjunctions and prepositions appeared late, both increasing slightly with advance in age.

13. Macy, D. S., and Macy, H. N. "A comparison of the Thorndike word list with the kindergarten word list." Unpublished investigation in the College of Education, State University of Iowa.

Problem: To determine the suitability of the Thorndike word list as a vocabulary basis for primary reading material.

Method: A comparison was made of the Thorndike and kindergarten word lists.

Findings: An examination of twelve primers and first readers published since 1921 showed that eleven measured the suitability of their vocabularies by their overlapping with the Thorndike word list. Most of the first 500 words of the Thorndike list occur in the kindergarten list, the majority of them in the first 500 words of the kindergarten list. Therefore, it makes little difference whether primary vocabulary is based on the Thorndike or kindergarten list. After the first 500 words, there is considerable divergence between the Thorndike list and the kindergarten list.

14. Nice, M. M. "The development of a child's vocabulary from the age of eighteen months to three and one-half years."

15. Probst, C. "The extent and range of information possessed by kindergarten children." University of Minnesota.

16. Thoma, E. "Some factors in the psychology of language, especially as they relate to the vocabularies of foreign preschool children." Master's thesis, University of California.

Problem: To study some factors in the psychology of language, especially as they relate to the vocabularies of foreign preschool children.

Method: Vocabulary lists were obtained by observing 12 children between the ages of 4 years, 3 months, and 4 years, 6 months, whose parents were of foreign birth. Each child had at least two siblings attending school. Each was observed for the same number of hours in the home when the father or older children were present, in free play with children of the same age, and when shown the contents of "Baldwin's Wonder Box" and a few other simple objects.

17. Van Alstyne, D. "Environmental factors related to vocabulary and intelligence tests of three-year-old children." Teachers' College, Columbia University.

Problem: To determine the relation of environmental factors to vocabulary and intelligence tests of three-year-old children.

Method: Seventy-five children within three months of their third birthday were studied. Twelve expert judges were asked to name ten factors which they considered favorable and ten factors which they considered unfavorable to the mental and language development of three-year-old children. A questionnaire was made up on the basis of these judgments.

Judgments were made by twelve expert judges of forty-seven kinds of play material, in the order in which they were considered desirable as constructive play material for three-year-old children. The actual play materials of the children were rated on this basis.

18. Waring, E. B. "Language as the creative expression of feeling in young children." Cornell University.

Problem: To study the spontaneous stories and songs of young children.

Method: The study is being carried on by means of accumulation, analysis, and classification of spontaneous expressions of the following sorts: the reproduction of a story already heard; the relation of an experience, either wholly realistic or involving some fanciful element; any rhythmic phrasing, whether or not it accompanies activity; anything which seems definitely to be an experimental use of language.

Any of the expressions which are suitable, even very short phrases, will be set to melodies.

19. Waring, E. B. "The use of language as meaningful symbols for performance." Cornell University.

Problem: To study children's behavior in routine performances in nursery school in terms of language direction.

Method: The children's responses to verbal directions used uniformly by all adults in the nursery school are recorded periodically for three days each at the beginning, middle, and end of the school year. The child's response is classified according to whether he passively accepts the words but shows no evidence that they mean anything to him; understands but ignores or resists; attempts to carry out the directions but does not succeed; succeeds, uses the words independently in directing himself, or uses the words independently with modification.

20. Washburn, R. W. "The early development of smiling and laughter." Yale Psycho-Clinic, Yale University.

Problem: To study individual differences in smiling and laughing in infants of various ages in the first year of life.

Method: Periodic developmental examinations, including experimental situations, are repeated at lunar month intervals.

III. Present Status of Our Knowledge of the Language Development of the Young Child

The study of language development of the young child began with biographical notes on the development of a single infant, in which language was included as one phase of development. Such notes were recorded by Taine in 1876 and by Darwin in 1877. This method has been adopted by numerous students from time to time. The early studies led to observations on language development alone in one young child, and later to simultaneous observations of a number of children and to the development of tests and experiments for language ability or status.

1. Problems That Have Been Studied

The vocalizations of the infant, beginning with the birth cry, and leading through the squalls and cries of the very young infant and the babble stage to the first word, have been studied by various persons with varying interpretations. With the preschool child the studies have centered around the development of word vocabularies, the development of sentences, and the production of sounds. A great majority of the studies have concerned themselves simply with the extent of the child's vocabulary or the number of sounds that he can produce at a given time. Very few studies have reported results on the growth of language through systematic records at stated intervals, although in a number of cases the observations have continued over a considerable period of time.

Test standards and scales of language progress have been developed only within the past few years, although language tests have figured rather largely in the standard intelligence scales at the lower age levels. Sporadic attempts have been made to study (1) specialized vocabularies, such as the names of colors, self words, or words revealing the concepts of number, time, and space; (2) the relation of language development to other phases of development, such as the appearance of certain physical phenomena or traits, the age of walking and talking, bladder control, conduct control, thought, intelligence, handedness; (3) the relation of language to the occupations of parents and to environmental conditions; and (4) special problems in language development, such as the order of difficulty of the words in a vocabulary test, the compilation of the words most frequently used, speech defects, the influence of similarity in associated words, and the acquisition of French vocabulary by English-speaking children. The stages of learning a language, the function and structure of language responses, and the development of the use of the sentence and of the various parts of speech have also received some consideration.

2: Methods That Have Been Used

A. Observational Method

The observational method has been the most widely used method in the study of the language development of young children. More than sixty articles have been published dealing with the results of observations of the spontaneous speech of one, two, or three children in the home. These observations were made largely by one of the parents. For the most part, the child's words, sounds, and expressions were listed as they occurred. In a very few instances additional means were used, such as providing occasions for the use of certain words, scanning a dictionary or published vocabulary list of words, checking in a dictionary the words the parent was sure the child knew and testing the child on doubtful words, or checking words in a dictionary as they occurred.

a. Continuous Observations on Single Children. Continuous observations on one child or on a small number of children from birth to various ages from 9 months to 3 years have been reported by a number of investigators. Among those who have reported for the longer periods beginning with birth are an anonymous author,

Bateman, Bohn, Champneys, Cooley, Darwin, Dearborn, Dewey, Fenton, Guillaume, Hall, Kenyeres, Mickens, Moore, Nice, Shinn, Stern, Taine, and Tracy. Other continuous observations on a few children have begun at various ages and have continued over varying periods of from one day to several weeks, or, in a few instances, for one or two years. Among those who have reported for such periods are Bateman, Beyer, Bloch, Boyd, Brandenburg, Bush, Chamberlain, Court, Dewey, Drever, Drummond, Gale and Gale, Gesell, Grant, Heilig, Hills, Holmes, Holden, Hull and Hull, Humphreys, Langenbech, Lukens, Major, Mateer, Nice, Pollock, Salisbury, Snyder, and Whipple.

b. Periodic Observations on Single Children. Periodic observations, varying in length from a few minutes or a few hours a day to several weeks prior to or near a birthday or given time, have been made at different age levels by several investigators. Among them are Bateman, Boyd, Brandenburg, Campbell, Drever, Gale and Gale, Jegi, Kirkpatrick, Nice, Pelsma, Perez, Piaget, Rowe, and Salisbury.

c. Observational Method with Larger Numbers of Children. A few investigators have used the observational method with larger numbers of children. Blanton reports the results of continuous observations in a hospital of a large number of infants from birth to 30 days of age. Gesell gives a tabular summary of the words reported by fifty mothers of babies at 15 and 18 months of age. He also reports results on the observational method combined with the clinical approach in the case of 500 infants and preschool children and for a group of 90 infants of ages up to 30 months, seen on an average of four times. Perez and Tracy mention observations of many infants in the home, but fail to state the number. Drever recorded the spontaneous language of 21 school children, 3 to 5 years of age, for two hours a day for from six to ten weeks. Piaget observed several children from 3 to 11 years of age in connection with his study of the language and thought of the child. Smith reports the results of one hour of observation of each of 88 children from 2 to 5 years of age in free play at preschool laboratories. Johnson observed a small group of children less than 3 years of age in a nursery school in order to study the influence of the immediate environment on language. The Child Study Committee of the International Kindergarten Union has compiled the results of

a large number of observations made in kindergartens and in homes. Bateman, Conradi, Doran, Gerlach, Magni, Nice, Smith, and Waddle include reviews of the literature of previous studies based on the observational method. Binet and Simon observed the language of several feeble-minded persons in order to gain an insight into the development of normal persons.

d. Investigations in Progress. Several significant studies using the observational method are in progress. Gesell, at Yale University, is observing and recording the vocalizations and listening responses of infants at intervals of four weeks as a part of a systematic normative investigation of infants. Klein has analyzed the spontaneous conversation of children in the preschool laboratories at the University of Iowa for the purpose of determining whether the pattern of the child's early sentence structure is similar to the primitive language and how the child develops in the use of sentence structure. Waring, at Cornell University, is making periodic observations of the young child's use of language as meaningful symbols for performance, and is collecting and classifying the spontaneous songs and stories of young children. McCarthy, at the University of Minnesota, has observed fifty consecutive verbal responses of each one of 140 children from 18 to 54 months of age and has analyzed them according to length of response, the function of the response in relation to the child's environment, complexity of sentence structure, and parts of speech. Thoma, at the University of California, is obtaining vocabulary lists of 12 children 4 years of age, whose parents are of foreign birth.

e. Critique of Observational Method. The observational method of studying language development, when used by one investigator with a large number of children and under as nearly identical conditions as possible, as in the studies just cited in progress, should prove to be a valuable instrument for determining development. When used with one, two, or three children each by a large number of investigators of varying backgrounds and types of training, of varying relationships to the subjects observed, and under varying conditions of observation, as in a large share of the literature, the value of the method is somewhat more doubtful, because of the impossibility of comparing results of the separate investigations and the unreliability of using results on a single child

as a basis or standard for comparison. The method offers the advantage of being an easy one to apply in the natural surroundings of the child. It offers the disadvantage of requiring a relatively long period in order to insure a reliable sampling. For many phrases of the study of infants and very young children it is the most feasible method—or, at the least, a valuable supplementary measure. In the study of language development, in which imitation plays such an important rôle, it is particularly useful. Too often, however, the method has lent itself to studies that have "just growed up" like Topsy and have not been carefully planned for integration into the sum total of knowledge.

B. Tests and Experimental Method

a. Vocabulary. Comparatively few investigations using tests or the experimental method in language development have been made, although there is now a decided tendency in that direction. An early attempt to test the vocabulary of the young child was made in 1909 by Chamberlain and Chamberlain, who analyzed the definitions given for a list of words by a four-year-old girl. Cobb studied the order of difficulty for kindergarten children of the vocabulary test in the Stanford-Binet test. Kuhlmann and Terman included tests of language in their standardizations of the revisions of the Binet scale of intelligence. Descoeudres used a series of objects, pictures, and questions in the establishment of her partial and complete language tests, which she standardized into a scale of language development by applying it to 395 French children from 2 to 6 years of age. Baldwin and Stecher tested the ability of 105 preschool children to name the pictures of fifty familiar objects, to recall the name of familiar colors, and to respond to questions involving concepts of time and to situations involving the concept of number. Gesell used a combination of tests with other methods in a series of situations for the determination of the language status of 500 preschool children from birth to 6 years of age, in a revised scale of normative values based on 429 examinations of 90 infants up to 30 months of age, and (with Lord) in a comparison of nursery-school children from homes of low and high economic status. "No effort was made" by him, however, "to place the subjects under rigidly uniform experimental or laboratory

conditions."[2] "Many of the items . . . are tests with strictly standardized procedure; others, however, do not deserve the term 'test' in this sense, because they are dependent upon less controlled observation or upon inquiry."[3] Smith developed a vocabulary test using objects, pictures, and questions and applied it to 273 children from 8 months to 6 years of age. Town, stimulated by the work of Binet and Simon, analyzed the results of tests of 285 feebleminded children in order to gain an insight into normal development.

The relation between various factors in the environment of three-year-old children and their vocabulary and intelligence is being investigated by Van Alstyne. A multiple-choice vocabulary test has been devised and applied to 75 children not attending nurseries or preschools, and the relation determined between vocabularies and the child's intelligence as measured by the Kuhlmann test, the mother's intelligence as measured by the Thorndike test of word knowledge, the socio-economic level of the home as measured by the Minnesota scale for rating living-room equipment, and the occupations of the father as rated on the Barr scale. Updegraff has tested the understanding by preschool children of the words *nearer* and *farther* as a part of a study of distance perception. Arlitt is making a study of the comparative vocabularies of white and negro children between the ages of 2 and 4 years, testing 100 children of each race by the Iowa 200 word list. Washburn is including experimental situations in a study of individual differences in smiling and laughing in infants.

b. Sound Production. Tests of the ability of preschool children to produce certain sounds have been made by Morrison and by Baldwin and Stecher. Morrison tested 218 children from 5 to 7 years of age on a list of 100 words containing all the common combinations of consonant sounds, both as initial and final elements in syllabic formation. The child's response to pictures was tested, but only the speech defects were recorded. Baldwin and Stecher gave a preliminary report of a picture and object test for eliciting spontaneous speech from preschool children in a study of normal development of sound production. A fuller report of the applica-

[2] Gesell, A. *The Mental Growth of the Preschool Child: A Psychological Outline of Normal Development from Birth to the Sixth Year Including a System of Developmental Diagnosis.* New York: Macmillan, 1925. 447 pp. (pp. 89-99)

[3] *Ibid,* p. 60.

tion of this method to 205 children between the ages of 2 and 6 years is being prepared by the staff of the Iowa Child Welfare Research Station and the Department of Speech of the University of Iowa.

c. Special Conditions of Language Development. Experiments dealing with special conditions of language development have been made by Watson, Meek, Waring, and Cochran. Watson studied the formation of a conditioned verbal response in one child. Meek studied the effect of varying amounts of initial practice, of varying amounts of later practice, and of similarity of associated words in learning to read certain words; 71 children, 4, 5, and 6 years old, were tested, and the cues used by the children in recognizing the words were analyzed. Waring studied the response to language approval through conduct control of a group of 10 preschool children. Cochran has investigated the acquisition of a simple French vocabulary by 14 children, 4 and 5 years of age. As yet, concrete experimental situations have not been devised in connection with the study of the sentence.

d. Critique of Experimental Method. Tests constitute a special device for obtaining a measure of the child's status at a particular time. The experimental method, utilizing specific tests, offers the advantage of results obtained under carefully defined and controlled conditions capable of verification. The problem of devising test situations that will afford a reliable index of the total language activity of the child is an important one. The experimental method represents a carefully planned approach to a particular problem, or phase of a problem, including a consideration of possible contributing factors. The results are therefore more definitely usable than results obtained by the observational method, unless the conditions of observation in the latter case are rigidly controlled. These results cannot safely be applied to conditions differing greatly from those under which the experiment was conducted.

C. Clinical Method

The clinical method, utilizing in part the test and experimental methods, has been used by Gesell and by Washburn in the studies already mentioned. Gesell is also using the clinical method with two cases of delayed speech in children of normal intelligence.

Mead examined the case histories of 50 normal boys and girls, 84 feebleminded boys, and 60 feebleminded girls in order to compare the age of walking and talking in relation to intelligence.

The use of many sources of information on the child's development in making a judgment or diagnosis is a valuable asset of the clinical method; the lack of adequate description or record of what factors have been considered in making a judgment constitutes a disadvantage of the method. While the clinical method may escape being stereotyped, it complicates comparison of results of different investigators working at different places, because of the difficulty of evaluating the subjective elements entering into the judgment.

D. Analyses of Available Data

A tabulation of the words reported in three investigations in order to determine the most commonly used words has been made by Horn. A comparison of the Thorndike and the Horn kindergarten word lists as a vocabulary basis for primary reading has been made by Macy and Macy, by means of an inspection of a number of primers and first readers. An analysis of the rôle of language development in the evolution of the structure of mental activity, through an interpretation of available data and the application of the results to philosophical theory, is being made by Lorimer.

E. General Discussions

Among the general treatises on or including the origin and development of language and speech may be mentioned: J. Mark Baldwin, *Mental Development;* Blanton and Blanton, *Speech Training for Children;* De Laguna, *Speech: Its Function and Development;* Fenton, *A Practical Psychology of Babyhood;* Jespersen, *Language;* Johnson, *Children in the Nursery School;* Mitchell, *Here and Now Story Book;* O'Shea, *Linguistic Development and Education;* Sapir, *Language: An Introduction to the Study of Speech;* Stern, *The Psychology of Early Childhood up to the Sixth Year;* and Tracy, *The Psychology of Childhood.*

3. Results

A. Infant Language

The birth cry of the infant, according to Blanton, constitutes the beginning of language. She discusses the birth cries of a num-

ber of infants observed in a hospital, from the standpoint of the sounds produced and their timbre or pitch. Fenton, on the other hand, characterizes the birth cry as the child's earliest vocal experience, but claims that "during this early period sounds are reflex in character; when the vocal muscles chance to contract, sounds arise, but they are uttered without intent, and are not to be thought of as indicating particular meanings."[4] She does not credit the infant with intent or purpose in his utterances until he reaches the babble stage.

During the first thirty days of the infant's life, Blanton found individual differences in the cries and also differentiations in vowels and consonants, timbre, and pitch in the cries of the same infant, but no one cry was used as a response to one set of circumstances that was not used at some time for other circumstances. Differentiated cries according to varying causes or conditions of hunger, noxious stimuli, fatigue, fright, loncliness, pain, and impatience were observed by Blanton, Champneys, Darwin, Hall, and O'Shea. Gesell found that 65 to 84 percent of children 4 months old can vocalize two or more distinguishable sounds, and Tracy reports that long before the sixth month the primitive vowels are combined with one another and consonants to produce the first syllabic utterances.

Smiling was reported by Dearborn as occurring on the seventh day and by Perez as occurring on the fifteenth day, but Bohn, Champneys, Darwin, and Hall did not note smiling or laughing until from five and one-half to nine weeks after birth. Dearborn noted laughing aloud on the fifty-eighth day.

Humphreys gives four periods in the child's linguistic efforts: (1) mimicry of sounds rather than of actual words; (2) understanding names of people and simple sentences; (3) mimicry of language, using real or imagined words without reference to signification; and (4) acquisition of words. The infant under observation reached the second stage at about 8 months. Appropriate motor response to a command early in the second year is reported by Major. Imitation of the intonation of the voice, of sounds, or of words was noted at various ages from the seventh to the twelfth

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[4] Fenton, J. C. *A Practical Psychology of Babyhood.* Boston: Houghton Miffin, 1926. 348 pp. (p. 119)

month by Champneys, Dearborn, Gesell, Holmes, Major, Michens, Moore, O'Shea, and Shinn.

B. Sound Production

Studies of the sounds produced at different ages have been made by Blanton, Dearborn, Hall, Hills, Holmes, Lukens, Pollock, Moore, O'Shea, and Tracy. Blanton recorded and analyzed the sounds produced by a number of infants during the first thirty days of life. Morrison recorded the defects of sound production of 218 children from 5 to 7 years of age. Moore found that at the close of the fourth month the child observed was capable of making all the sounds in the language, while Taine found that at 12 months all the material for language was present. Kenyeres found that before 2 years of age all the sounds in the French language were produced correctly, and Fenton found that all the English sounds occurred during the first year, with the exception of the sounds of *f* and *v*. Sixty-four different sounds in a twenty-four-hour period are reported by Gesell for one infant at 6 months. Sixty-three variations in vocal expressions before the child was 6 months of age, forty of which were heard in a single morning, are reported by Hall.

An attempt of the child to express himself by means of sounds is given by Bohn as occurring during the tenth week and by Fenton as occurring during the thirty-eighth week, while Drummond found that specific sounds were used to represent wants at approximately 15 months.

Gesell estimates that at 6 months 3 percent of the waking time of one child was expended in some form of speech or language activity and that at 9 months 6.66 percent was so spent.

Moore observed that "though so many sounds were uttered with fluency during the month which preceded the acquiring of language, not a word of those which formed the first vocabulary, with the single exception of the word *ma-ma* was phonetically in exact reproduction of the word copy."[5]

C. Stages of Language Development

Stern distinguishes five stages in normal speech development: (1) Preliminary: first year, babble, imitation of sound-forms, first

[5] Moore, K. "The mental development of a child." *Psychol. Monog.*, 1895-1897, Vol. 1, No. 3. 150 pp. (p. 115)

understanding of requests. (2) First period: mastery of a few sounds used with special meaning that must be considered sentences of one word. (3) Second period: awakening of the consciousness of the object of speech; the vocabulary shows great increase, first by nouns, then by verbs; one-word sentences are discontinued. (4) Third period: complete mastery of uninflected speech. (5) Fourth period: the purely paralactic sentence formation is abandoned.

Vocal habits, claims Watson, do not become language habits until they become associated with arm, hand, and leg activities and are substitutable for them. The growth of the vocabulary of the child is only a rough measure of the growth of true language habits. The child uses many words that belong to the conditioned reflex level of word activity. At what point in their language organization children make the transition from overt to whispered, and then to implicit, language has been studied only incidentally.

The following criteria of normal speech development have been set up by Nice: (1) the first word by 15 months; (2) a vocabulary of 200 words at 2 years of age, with the beginning of the use of sentences; and (3) a vocabulary of 600 words at 3 years of age, with representatives of all the parts of speech.

The time of the observed appearance of the first word varies from the eighth month to the seventeenth month in the reports of Bateman, Bohn, Boyd, Brandenburg, Chamberlain, Darwin, Dearborn, Gesell, Grant, Hall, Hull and Hull, Major, Mickens, Moore, Nice, Pelsma, Pollock, Shinn, and Taine. A summary of the literature to 1917 is included by Bateman; all but one of the authors included reported the first word at an earlier age than the criterion proposed by Nice. Mead, from an examination of case histories, calculated that the median age for learning to talk, for 25 normal boys, was 16.5 months, and for 25 normal girls, 15.5 months.

D. Word Vocabularies of Individual Children

A large number of studies of general word vocabularies have been made. Most of the studies, however, have been made by the observational method on a single child or a very small number of children. Such variations have occurred in the scope of ages of the children observed, in the training of the observers, in the methods of recording, in the treatment of results, and in the decision as to

what constitutes a separate word, that a reliable summary or comparison of results is extremely difficult, if not impossible. Some of the observers, in counting the words in a child's total vocabulary, excluded proper nouns, while others included them; some listed verb forms but once, while others counted the infinitive and participial forms as separate words. 'Invented' words were counted by some and ignored by others.

A summary of the published vocabularies of children at 3, 4, 5, and 6 years of age was given by Nice in 1917. She reports the extent of vocabularies as published, and also the extent of the same vocabularies reduced to their lowest terms. In reducing the vocabularies to the lowest terms, she adopted Bateman's plan for counting the words, including no proper nouns or variations of nouns, and verbs and adjectives only when from different roots. In 1926 she again summarized the previous vocabulary studies with the following findings:

1. At 1 year of age a great many children have not begun to talk, while at 18 months some have not.
2. The twenty-eight vocabularies at one year varied from 1 to 24 words, with an average of 7.
3. The fifty-three vocabularies at 18 months varied from 1 to 523 words, with an average of 71.
4. The forty-seven vocabularies at 2 years varied from 5 to 1212 words, with an average of 328.
5. The eleven vocabularies at 30 months varied from 30 to 1509 words, with an average of 690.

The linguistic activities of 7 children, from 2 to 4 years of age, for a single day, reported by Gale and Gale and by Brandenburg, are summarized by Waddle[6] in the following table:

Observer	Age	Child's vocabulary	Different words used	Total words used	Percent vocabulary used
Gale	2	729	635	5,194	87.0
Gale	2	741	396	4,275	53.4
Gale	2	1,400	805	10,507	
Gale	2.5	1,432	751	9,290	52.5
Gale	2.5	1,509	629	8,992	41.6
Brandenburg	3	2,282	859	11,623	37.6
Brandenburg	4	4,200	1,000	14,930	23.0

The children used from 23 to 87 percent of their vocabularies in a single day.

[6] Waddle, C. W. *An Introduction to Child Psychology.* Boston: Houghton Mifflin, 1918. 317 pp. (p. 174)

E. Parts of Speech

Some attention has been given by a number of workers to the analysis of the parts of speech. Discrepancies in the classification of certain portions of language activity have arisen because of the difficulty of assigning the part of speech to the same word or expression under different conditions. A summary of the literature on the relative number of the various parts of speech was made by Waddle, in 1918, with the following findings:

1. Interjectional speech was characteristic at the beginning.
2. Nouns were used early in relatively large numbers.
3. From the first year on, the verbal element was relatively large.
4. The proportion of adjectives to adverbs was greater at the younger ages.
5. Personal pronouns, relative pronouns, and subordinating and connecting words were acquired with difficulty.

An analysis by Smith of the spontaneous conversations for one hour each of 101 children from 2 to 6 years of age showed that at 2 years of age verbs, nouns, and adverbs were the parts of speech most frequently used, and at 3, 4, and 5 years, verbs and pronouns were. The frequencies of the parts of speech found by Smith[7] are given in the following table:

Age group, years	2	3	4	5
Number of children	19	28	32	22
Part of speech		*Frequency percent*		
Nouns	22	16	15	15
Pronouns	16	25	24	25
Verbs	26	27	26	27
Adjectives and articles	5	7	11	12
Articles	1	2	5	5
Adverbs	21	15	13	11
Prepositions	2	5	7	6
Conjunctions	0.5	1.5	2	2.5
Interjections	7	3	2	2

F. Vocabularies of Large Groups of Children

A few significant studies on the extent of vocabulary in a large group of children have appeared. The most extensive of these in the English language are the investigations of Smith and of Gesell. Smith developed a test by selecting every twentieth word from the Thorndike list of most common words and eliminating from these

[7] Smith, M. E. *An Investigation of the Development of the Sentence and the Extent of Vocabulary in Young Children.* Iowa City, Iowa, 1926 (Univ. of Iowa Studies in Child Welfare, vol. 3, no. 5), 92 pp. (p. 24)

all words not found in any of the recorded vocabularies of children. The responses were elicited through the use of objects, pictures, actions, and questions. She found that the average number of words in the vocabularies of 273 children increased from 0 at 8 months to 2562 at 6 years; the average gain per year from two to six years was 572.5 words. The following table from Smith[8] gives the average size of vocabulary at the different ages:

Age group		Number of children	Average I.Q.	Vocabulary	
Years	Months			Number of words	Gain
	8	13		0	
	10	17		1	1
1	0	52		3	2
1	3	19		19	16
1	6	14		22	3
1	9	14		118	96
2	0	25		272	154
2	6	14		446	174
3	0	20	109	896	450
3	6	26	106	1,222	326
4	0	26	109	1,540	318
4	6	32	109	1,870	330
5	0	20	108	2,072	202
5	6	27	110	2,289	217
6	0	9	108	2,562	273

Forty-three children were tested more than once, some three or four times.

The reliability of the test, found by correlating halves of the test and applying the Spearman-Brown formula, was .97. A comparison of the average vocabulary scores of 55 children from 2 years, 6 months, to 6 years of age on the Smith, Cobb, and Descoeudres tests showed close agreement between the Smith test and the Descoeudres test, translated from the French. The Cobb test average was lower than the others at the younger ages, but there was less difference from 5 years on. The correlation between Smith and Descoeudres tests for the raw scores was .94 $\pm$ .01, for the total vocabularies .875 $\pm$ .02; between the Smith and Cobb tests .84 $\pm$ .03; and between the Cobb and Descoeudres tests .785 $\pm$ .04. A correlation of .91 $\pm$ .01 was found between the order of difficulty of the words of the test, as determined by their frequency in seventy-seven children's vocabularies and the frequency of knowledge of the words as found by testing 194 children. A

[8] *Ibid*, p. 54.

table showing the results of retests from two to eleven months later for 33 children is given in the Smith study. A slight sex difference in favor of girls was found at 2 and at 3 years, but none at the later ages. There were indications of a slight difference in favor of the higher social classes, although the numbers were too few to draw definite conclusions.

In order to determine whether the order of birth had any effect on the size of vocabulary, first-born children were paired with later-born children of approximately the same chronological and mental age. No significant difference was found between the children of different orders of birth.

The ten words that were used most frequently by these children were *I, is, it, you, that, do, a, this, not,* and *the.*

The most significant factor in increase of vocabulary was found to be mental age. The correlation between mental age by the Stanford-Binet test and vocabulary was .69 ± .03 with chronological age constant. The correlation between sentence length and size of vocabulary was .69 ± .05. Complete vocabulary test records are included in the appendix of the study.

Gesell, by means of the clinical and natural history method, investigated the language development of 50 children each at 4, 6, 9, 12, 18, 24, 36, 48, and 60 months of age. His normative items include twenty-four items designed to determine language development. These are divided under the headings of vocabulary, word comprehension, conversation, and reproduction. Ratings were assigned to each item in terms of a numeral representing the age of the child in months and a letter value representing the frequency with which the item was found in the cases studied.

Because of the range of ages covered, and the inclusion of different responses to the same situation as separate items, the number of items applicable to any one age level is necessarily much smaller than the total number.

In addition to these normative items, Gesell presents lists of the words reported by the mothers of 50 babies 12 months old and 50 babies 18 months old. He states that the "median twelve-months-old child not only can say *dada* or *mama* or its equivalent, but has mastered at least three or four distinguishable words which

he articulates with much precision.'"[9] The most popular words other than *mama* or *papa* were *bye-bye* and *baby*. At 18 months, ninety-three different words and thirty-eight different phrases, were reported. *Bye-bye, ta-ta, hello,* and *how'do* were frequent.

The correct use of the pronouns *I, you,* and *me,* and of plurals and past tenses, by 50 two-year-old children was also studied by Gesell. All three pronouns were used appropriately by 48 percent of the children, two by 6 percent, one by 8 percent, and none by 38 percent. *I* was used appropriately by 46 percent, *you* by 54 percent, and *me* by 58 percent. The plural form was used correctly by 42 percent, the past tense by 40 percent, both by 36 percent, one by 10 percent, and none by 54 percent.

In his later book, *Infancy and Human Growth,* published in 1928, Gesell gives a revised schedule of these normative items in month intervals to 10 months, and at longer intervals thereafter to 30 months. The normative summaries for language are:

1. *One-month level.* (*a*) Gives definite heed to sound; (*b*) has differential cries for discomfort, pain, and hunger.
2. *Two-months level.* (*a*) Attends readily to the speaking voice; (*b*) makes a facial response to a social approach (in which the examiner brings face near the child to attract attention); (*c*) makes several different vocalizations.
3. *Three-months level.* (*a*) Smiles responsively to social approach; (*b*) gives vocal expression to feelings of pleasure.
4. *Four-months level.* (*a*) Laughs aloud; (*b*) responds vocally when socially stimulated; (*c*) vocalizes in self-initiated sound play.
5. *Five-months level.* (*a*) Turns head to voice or to hand bell; (*b*) gives vocal expression of eagerness; (*c*) vocalizes displeasure on withdrawal of coveted object.
6. *Six-months level.* (*a*) Vocalizes several well-defined syllables; (*b*) expresses recognition of familiars; (*c*) actively vocalizes pleasure with crowing or cooing.
7. *Seven-months level.* (*a*) Vocalizes satisfaction in attaining object.
8. *Eight-months level.* (*a*) Gives vocal expression to recognition; (b) vocalizes in interjectional manner.
9. *Nine-months level.* (*a*) Says *da-da* or equivalent; (*b*) listens with selective interest to familiar words.
10. *Ten-months level.* (*a*) Incipient or rudimentary imitation of sounds; (*b*) makes conditioned adjustment to certain words.

[9] Gesell, A. *The Mental Growth of the Preschool Child. A Psychological Outline of Normal Development from Birth to the Sixth Year Including a System of Developmental Diagnosis.* New York: Macmillan, 1926, 447 pp. (p. 217.)

11. *Twelve-months level.* (*a*) Says two words; (*b*) adjusts to simple verbal commissions; (*c*) places cube in or over cup on command.
12. *Fifteen-months level.* (*a*) Says four words; (*b*) uses expressive jargon.
13. *Eighteen-months level.* (*a*) Says five or more words; (*b*) uses jargon conversationally; (*c*) points to nose, eyes, or hair.
14. *Twenty-one-months level.* (*a*) Joins two words in speech; (*b*) names one picture; (*c*) repeats things said.
15. *Twenty-four-months level.* (*a*) Names three of five objects; (*b*) points to five objects on card; (*c*) uses words in combination.
16. *Thirty-months level.* (*a*) Points to seven pictures; (*b*) names five pictures.

Gesell stresses the fact that the schedule has been used only by trained examiners, and always in association with supplementary data which were weighted in deriving the developmental estimates. "It must be emphasized that serious use of the schedule, in its present form, presumes a large amount of clinical familiarity with infants of every age."[10]

In standardizing a series of mental tests for preschool children, Stutsman included three language tests: (1) repetition of words and word groups, fourteen words in all; (2) ten simple questions; and (3) an action-agent test. The standardization group comprised 529 children, 18 to 71 months old. The tests for repetition of words and word groups were applicable to children from 18 to 30 months of age. Most of the answers to the simple questions required the naming of objects or definition by use. Typical responses are reported. The Woodworth and Wells action-agent test was rearranged in difficulty; it was found to be practicable for children of 30 months. Some children tended to perseveration throughout a series of answers; others showed a wealth of associative trends, naming several objects for each question. Decile tables of scores are given for each test.

Some tests of speech development are included in the Kuhlmann revision of the Binet-Simon scale for the measurement of intelligence, standardized on 2000 children of various ages. At 12 months of age the child is required to vocalize such syllables as *ba, dada, mama, nan, papa,* or similar ones. At 18 months he is required to repeat *mama, papa, yes, no, cat,* and *man* and to understand a

[10] Gesell, A. *Infancy and Human Growth.* New York: Macmillan, 1928. 418 pp. (p. 128.)

question. Other tests in the Kuhlmann and Stanford revisions at the younger age levels that involve vocabulary or the understanding of language are recognition or pointing out of objects in pictures, naming pictures from memory, obeying simple commands, pointing to parts of the body, giving sex, naming familiar objects, repeating syllables and digits, giving definitions, counting, and naming colors. The order of difficulty for kindergarten children of the vocabulary test of the Stanford revision of the Binet test was investigated by Cobb, who found that for young children the words in the test showed an order of difficulty different from that indicated on the blanks.

A tabulation of the 1300 most common words used by children from 1 to 6 years of age was arranged by E. Horn on the basis of their frequency as reported in three investigations. A list of 2500 words in the vocabularies of normal children before entering first grade has been compiled by the Child Study Committee of the International Kindergarten Union, with M. D. Horn as chairman. Similar lists for younger children are being prepared.

G. Relation of Language Ability to Other Phases of Development

a. Intelligence. A few studies have been made of the relation of language ability to other phases of the child's development. Mead, from an examination of the case histories of 50 normal boys and girls, 84 feebleminded boys, and 60 feebleminded girls, found that children of normal intelligence began to walk and talk at an earlier age than feebleminded children. The median age for walking for normal boys was 13.875 months; for normal girls, 13.21 months; for feebleminded boys, 22.2 months; and for feebleminded girls, 20.7 months. The median age for talking for normal boys was 16.5 months; for normal girls, 15.5 months; for feebleminded boys, 35.7 months; and for feebleminded girls, 30 months. Binet and Simon analyzed the language status of an idiot, a low-grade, medium-grade, and high-grade imbecile for the purpose of gaining an insight into the language status of normal children of the same mental ages. The method was carried further by Town, who studied the language of 285 feebleminded children. A gradual increase in vocabulary was found with increase in mental age. Ability to use voluntary sentences preceded ability to repeat

sentences. Speech defects, with the exception of stuttering, decreased with mental age.

b. Physical Activity. Johnson found from observations of the spontaneous conversations of children less than three years of age in the nursery school that children most frequently used their vocal equipment when they were engaged in physical activity. Shouts, grunts, squeals, roars, and words were characteristic responses and did not usually occur unassociated with full body activities. A characteristic feature of speech reaction was the tendency to rhythm, the syllables or words coming in regular beat or cadence. Language reactions and body activities seemed to be rhythmically related.

c. Social Classes. Descoeudres found differences in the extent of vocabularies of French children from different social classes. The differences between the two classes at the various ages were:

Age in years	Number of words in vocabulary	
	Wealthy class	Common class
2	1104	744
3	1880	1544
4	2216	1896
5	2592	2152
6	2832	2448

Gesell and Lord, from a clinical study of eleven nursery-school children from homes of low economic status and eleven from homes of high status, concluded that restraint and inhibition in spontaneous speech was more prevalent among children from homes of low economic status. There was a noticeably larger amount of conversation among children from homes of higher status. Smith found that, when children of the same age and equal mental ability were paired according to social status, the higher social class showed a higher average of words known, although the numbers were too few to allow drawing a definite conclusion.

d. Environmental Conditions. Drever made a comparison of the vocabularies of his three children with those of thirteen kindergarten children in Edinburgh. He concluded that the environment influences the child's vocabulary, and that the direction and development of his interest also influences it. Only slight sectional differences in the vocabularies of kindergarten children were found by M. D. Horn. In response to requests to kindergarten teachers in various parts of the United States for records of the vocabularies

used by children in directed and undirected lessons, 489,555 running words were received. The differences between directed and undirected lessons were small.

An extensive investigation of the relation of environmental factors to vocabulary and intelligence of three-year-old children is being made by Van Alstyne. Twelve judges were asked to name the ten factors that they considered most favorable to the mental and language development of three-year-old children. The fifteen factors most frequently named were:

1. Suitable play materials and books.
2. Conversation with child by adults.
3. Proper physical surroundings and routine.
4. Other children in the home.
5. Association with other children.
6. Good economic conditions.
7. Suitable excursions.
8. Social atmosphere in the home, visits to others, etc.
9. Responsibility for certain personal and household tasks.
10. Reading to the child.
11. Parents' use of good English.
12. Educational status of parents.
13. Stimulation to independent activity.
14. Interest of parents in the child's activity.
15. Knowledge of level reached by the child and interest in his reaching the next state.

A questionnaire was made on the basis of these judgments. A vocabulary-comprehension test, consisting of fifty cards with four pictures on a card, was arranged and given to 75 children 3 years of age, who had not attended nursery schools or preschools or come in contact with large groups of children. The intelligence of the children was determined by the Kuhlmann revision of the Binet test; the intelligence of the mothers was tested by the Thorndike test of word knowledge. The socio-economic level of the home was determined by using the Minnesota scale for rating living-room equipment, and the occupations of the fathers were rated on the Barr scale. The correlation between mental age and the vocabulary test scores was $.81 \pm .03$, and between vocabulary and the Minnesota scale $.67 \pm .04$. The reliability of the test was .865.

Johnson states that the questions of young children are in a large measure not for the purpose of eliciting information, but for

the sake of establishing social contact. However, the conversation of the child deals mainly with his own activities and experiences.

e. Handedness. A series of case studies of children in whom speech retardation or disturbances in speech were found in connection with interference with congenital left-handedness is presented by Nice.

f. Bladder Control. It was noted by Hull and Hull that the difficult early stages of talking of an infant coincided exactly with a plateau in the curve representing voluntary control of the bladder. Learning to talk seemed to interfere with the voluntary control of the bladder.

g. Conduct Control. The relation between early language habits and early habits of conduct control was investigated by Waring. Two groups of five children each were paired as to intelligence quotients and mental age and were given a series of tests involving motor control and discriminative responses. Both groups received a nod and a smile, and one group a meaningless word, *Benito,* in addition. In another experiment *Right good* was substituted for *Benito* and the same child's response to both language and non-language approval was tested. Language approval was found to facilitate, insure, and extend conduct control; it operated directly in the immediate situation both as practice and as carry-over of mind set.

H. Special Conditions of Language Development

a. Influence of Similarity in Associated Words. The influence of the similarity of associated words in learning to read formed part of an experimental investigation by Meek on learning and retention in young children. Seventy-one children, from 4 to 6 years of age, were examined. Six words were selected to be taught; for each word, five other words similar in initial letter, final letter, first two letters, final two letters, or middle two letters, were selected to act as confusing words. It was found that the children, deliberately or accidentally, hit upon certain letters or groups of letters as means of identification of the words. In general, the characteristic distinguishing the word from the others in its group was chosen as the cue. A large number of recognitions at one time did not bring efficient results. In no case was there total forgetting at any period.

b. French Vocabulary. The acquisition of French vocabulary by young English-speaking children has been investigated by Cochran. Fourteen children, 4 and 5 years of age, were given thirty practice periods of ten minutes each. Each word was taught by the formation of several associative bonds. The number of words recognized increased rapidly from the first lesson; the number of words recalled increased more slowly. There was a tendency to use single words or phrases rather than complete sentences; when sentences were used, they were formed after the pattern of the sentences used by the examiner. There was no indication that words of one part of speech were more easily learned than those of another. The size of the child's English vocabulary was somewhat indicative of the size of his French recognition vocabulary. A closer relationship was found between intelligence and the ability to use the language than between intelligence and the ability to understand the language.

I. Specialized Vocabularies

a. Color. Color vocabularies of single children at different ages are reported by Bohn, Boyd, Bush, Dearborn, Grant, Hall, Heilig, Langenbeck, Nice, Pelsma, Sanford, and Shinn. Bateman, who gives a summary of the literature on children's ability to name colors, credits Shinn with the record of the earliest use of a color term. Her niece used *red* at 16 months. Hall, however, reported the use of *black* at 13 months. The color names reported before 26 months of age by the various authors include *red, blue, green, white, black, yellow, gray, brown, pink,* and *purple.* The summary by Bateman gives the following number of colors at the various ages:

Age in years	Average number color terms	Range	Studies summarized
2	2.5	0- 6	15
3	8.4	4-13	7
4	8.8	6-12	5
5	6		1
6	7		1

The strength of association of color names, determined by the ability to recall the names of color squares, was tested by Baldwin and Stecher. Forty-eight children, from 3 to 6 years of age, were required to name fifty squares of the Woodworth and Wells color

blank, including red, green, yellow, blue, and black. Nine of the forty-eight children did not succeed in learning the names of the colors sufficiently to take the test. The time required for naming fifty colors averaged 159.7 seconds at 3 years, 142.1 seconds at 4 years, 92.4 seconds at 5 years, and 92.1 seconds at 6 years.

The ability to name correctly the colors red, yellow, blue, and green is placed at the five-year level in the Stanford and Kuhlmann revisions of the Binet test.

b. Number. Number vocabularies of children at different ages are reported by Boyd, Court, Nice, Pelsma, and Whipple. The ability to count four pennies, pointing to each in turn, is placed at the four-year level in the Stanford revision of the Binet test and at the five-year level in the Kuhlmann revision. Three tests of number concept that involve number vocabularies were included by Baldwin and Stecher in their series of tests of number concept. In the first test the child was asked to count as far as he could without objects. The highest number correct without intervening error at 2 years was 1; at 3 years, 3.4; at 4 years, 10.6; at 5 years, 23.7; and at 6 years, 25.3. The second test involved the child's ability to count with marbles. This counting with objects was more difficult than merely repeating the numbers. No score was made at 2 years; at 3 years the number correctly counted was 2.1; at 4 years, 9.2; at 5 years, 21.3; and at 6 years, 27.6. Another test was the ability to hand to the experimenter a given number of sticks upon request. The test was scored one point for each correct response.

c. Time. Specific vocabularies relating to time have been mentioned by Boyd, Court, and Nice. A test of time concepts through responses to a list of forty-seven questions was given to 40 preschool children by Baldwin and Stecher. The results were reported in relation to the development of the concept of time rather than the language involved. Thirteen children knew the days of the week; more than half knew whether it was morning or afternoon; half understood *tomorrow* as distinguished from *today;* the majority knew the three main meals of the day; and the majority were oriented with regard to special days of the week, but had little conception of annual holidays or of a long number of years.

d. Distance. Experimental situations to test the understanding of the words *nearer* and *farther* have been devised by Upde-

graff. A series of comparisons of the distances between the subject and two cubes on a table was made by 51 preschool children. No children 3 years or less understood the use of the two words. The words were recognized by a large majority of the four and five-year-olds, and by all the six-year-olds.

J. Sentences

a. One-word Sentences; Sentence Equivalents. The use of the sentence and sentence structure have received the attention of several investigators. Single words used to express thoughts are sometimes classified as one-word sentences or sentence equivalents. The one-word sentence is an undifferentiated word, according to Guillaume, and cannot be classed into any one part of speech. It may be used as a noun, with a gesture forming the verb, or it may designate the act, with a gesture designating the subject. One-word sentences are also recognized by Bloch, Lukens, Major, Moore, O'Shea, Nice, and Stern. This stage of development is placed at the latter part of the first year and the first part of the second year. Preceding the one-word sentence, according to Major, is the sentence sound—a sound used to express a wish or fact. After the one-word sentence, the next step, according to Guillaume, is the joining together of two one-word sentences to express one idea. Such sentences are also so classified by Bloch and Major.

b. Development of Sentence in Single Children. Studies of the development of the sentence through observations of a single child or a small number of children have been made by Bohn, Boyd, Brandenburg, Kirkpatrick, Major, Moore, Nice, Oatman, O'Shea, Pollock, and Snyder. The time of appearance of the first sentence is reported from the fifteenth to the twenty-sixth month by Bateman, Bohn, Dearborn, Drummond, Guillaume, Moore, Nice, Oatman, and Stern. The average for twenty children, reported by Nice, is 17.5 months. The number of sentences used by the child observed, the average length of the sentence, and the proportion of questions have been reported by Boyd, Brandenburg, and Nice. Nice observes that the complete sentence of from six to eight words is characteristic of the speech of the more advanced children of 3 years of age, whose vocabularies include about 1000 words. A table compiling the results of published material on the length of

sentences at different ages is included by Nice. Analyses of sentence structure have been made by Boyd, Moore, Nice, and Pollock.

c. Development of Sentence in Larger Groups of Children. At 2 years of age, 30 of the 50 children studied by Gesell used sentences; 20 used mere words. Gesell does not say what he considers to be a sentence, but he does state that the longest sentence used by 20 of the children included from six to eight words.

The most extensive published study on the development of the sentence is that by Smith, who recorded the spontaneous chatter of a group of 88 children from 2 to 5 years of age during an hour of free play with their fellows; 25 were observed more than once. The total number of words used during the hour, and the number of words per sentence, are given in the following table by Smith:[11]

AVERAGE ACCOMPLISHMENT IN WORDS OF 124 CHILDREN IN ONE-HOUR CONVERSATIONS

Number of children	Age Group *Years*	*Months*	I.Q.	Words Total number	Number to the sentence
11	2	0		78	1.7
18	2	6	109	118	2.4
17	3	0	106	223	3.3
23	3	6	109	344	4.0
17	4	0	107	400	4.3
22	4	6	109	415	4.7
16	5	0	105	400	4.6

A comparison is given of the conversation of the 25 children observed more than once. The average interval between observations was 4.6 months and the average gain for this interval was .63 words per sentence—or a yearly gain of 1.7 words. Much of the talk of the younger children approached monologue, rather than conversation. Babbling, defined by Smith as "voice play that is no attempt at communication and that does not involve the use of meaningful groups of words"[12] occurred more frequently among the younger children, although instances were found even in the oldest group.

The frequency of various types of sentences in one-hour conversations of 101 children is given in the following table by Smith:[13]

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[11] Smith, M. E. *An Investigation of the Development of the Sentence and the Extent of Vocabulary in Young Children.* Iowa City, Iowa, 1926. (Univ. of Iowa Stud. in Child Welfare, Vol. 3, No. 5) 92 pp. (pp. 17, 21, 22.)

[12] *Ibid,* p. 21.

[13] *Ibid,* p. 22.

Age group, years	2	3	4	5
Number of children	19	28	32	22
Type of sentence	*Frequency percent*			
Complete	37	68	84	87
Simple	98	91	88	85
Declarative	54	61	62	59
Imperative	22.5	19	22	20
Imperative and variations of imperative	30	31	29	28
Interrogative	6	9	11	15
Exclamatory	13	5	3	3
"Yes" and "No" only	4	6	3	3

The most significant trend in the development of the sentence with increase of age was an increasing tendency toward the use of longer and more complete sentences.

Other trends were a decrease with age in the proportion of simple sentences to complex and compound sentences, an increase in the number of questions, and a decrease with age in exclamatory sentences. Declarative sentences predominated at all ages.

Sample conversations are included in the appendix of the study.

McCarthy, in her unpublished study of fifty consecutive verbal responses of 140 children observed in the home, found that (1) the length of response increased with age, but more rapidly at the younger age levels; (2) there was a slight sex difference in favor of the girls; (3) there were differences between children of different occupational groups; (4) the length of response was greater for children who associated chiefly with adults than for those who associated chiefly with other children; and (5) hearing a foreign language in the home did not greatly affect the length of response. In McCarthy's analysis of the function of the response in relation to the child's environment, she found an increase with age in adapted information, questions, and answers, but a decrease in emotionally toned responses. There was a higher proportion of adapted information and questions at all ages among the children of the upper occupational groups. The same tendencies, though less marked, were found in relation to mental age. Simple sentences with a phrase were late in appearance, but showed a marked increase with age; compound and complex sentences also appeared late, but remained in small proportion throughout the upper age levels. The elaborated sentence appeared in the upper ages and showed a marked increase with age. Girls showed earlier development than boys. Omission of the verb was the most frequent type

of omission, with omission of the subject next. There were consistent differences in construction among the occupational groups.

Klein, from a study of the conversations of a group of preschool children, observed in pairs for fifteen minutes and within the whole group for another fifteen minutes, arrived at the following classification of the stages of development of sentence structure: Sentence equivalents, consisting of one word and a gesture are first used; then genuine attributive sentences; then the inflected type (predicative sentence form consisting of an object and a word expressing an occurrence); then hypotaxis or subordinate relation between clauses. Hypotaxis is arrived at in two ways: (1) each part of the sentence types mentioned above may be replaced by a so-called dependent clause, or (2) a dependent clause may be added as an attribute to part of another sentence.

K. Relation of Language to Thought

A classification of the functions of the child's language from the standpoint of its relation to thought has been made by Piaget[14] in his *The Language and Thought of the Child.* The spontaneous talk of two six-year-old children, each observed every morning for a month in school, was classified into the following categories:

1. *Egocentric speech*
   - *a.* Repetition (echolalia). The child repeats words or syllables for the pleasure of talking, with no thought of talking to anyone, nor even at times of saying words that will make sense.
   - *b.* Monologue. The child talks to himself as though he were thinking aloud. He does not address anyone.
   - *c.* Dual or collective monologue. An outsider is always associated with the action or thought of the moment, but is expected neither to attend nor to understand. The point of view of the other person is never taken into account; his presence serves only as a stimulus.
2. *Socialized speech*
   - *a.* Adapted information. This takes place when the child adopts the point of view of his hearer, and when the latter is not chosen at random.

[14] A supplementary volume by the same author, entitled *Judgment and Reasoning in the Child,* also translated from the French by M. Warden, has just been published. (New York: Harcourt, Brace, 1928.) This scholarly volume makes further analysis of the linguistic and thought processes of the child. Together, these two volumes by Piaget constitute a first psychological outline of The Logic of Childhood.

b. Criticism. This group includes all remarks made about the work or behavior of others. They assert the superiority of the self and depreciate others.
c. Commands, requests, and threats.
d. Questions.
e. Answers.

Twenty children between the ages of 3.5 and 7 years were observed in school; their conversations were similarly analyzed. The criterion of a conversation was fixed as three consecutive remarks about the same subject, made by at least two interlocutors. The conversations were classified into the following stages and types: collective monologue, association with the action of others, collaboration in action or in nonabstract thought, collaboration in abstract thought, quarrelling, primitive argument, and genuine argument. Piaget concluded that genuine argument and collaboration in abstract thought develop only after the age of 7 years. Before this age children have no conversation bearing upon logical or causal relations, the reason being that "at that age they hardly understand one another when they approach these questions."[15]

IV. Suggestions for Further Research

In spite of the fact that the number of published articles dealing with language development is relatively large, the knowledge of the subject is still comparatively meager. Further information is needed on almost every portion of the field, and many portions have been practically untouched by investigators. With the daily availability of greater numbers of preschool children and the increase in institutions carrying on research with young children, the contributions will appear more rapidly. The results of the many studies now in progress should add materially to the present fund of information.

The uncontrolled observations of a single child which filled the earlier literature on language development are yielding to the influence of the test, experimental, and clinical methods. The observation of language activity in general, with the study and analysis of results after the period of observation is over, is giving way to the planned observation of certain phases of development

[15] Piaget, J: *The Language and Thought of the Child.* Trans. from the French by M. Warden. New York: Harcourt, Brace, 1926. 246 pp. (p. 75.)

or observations planned to cover a definite period of time or stage of development. The observations are being made by trained workers instead of by parents and relatives, and other phases of the child's development are more carefully considered. Although the experimental and clinical methods have been applied to language development by a comparatively small number of investigators, the number of children on whom results have been obtained far exceeds the number with whom the observational method exclusively has been used.

Our knowledge of language ability needs supplementing in every direction. More information is needed on sound production and intonation of young children, particularly of infants, on the extent and specific content of vocabularies at the various chronological age levels, and on the extent, structure, and function of sentences. What constitutes normal speech, what constitutes speech defects in the young child, and why some children are slow, some fast, in learning to talk, are questions that need to be more definitely studied. What is the relation of babble talk to the basic sounds in the language? Does a child hear his own speech sounds; does he learn to modify his vocalizations through comparison of his own heard sounds with the heard sounds of others?

What effect does environment have on the language of the child? Is the rural child's language different from the city child's? Are there differences in different sections of the country? What effect does nursery-school attendance have on the language of the child; does companionship with children of his own age tend to accelerate or retard the child's mastery of language? If there is improvement in intelligence with nursery-school attendance, is there a consequent increase in language ability; do the same conditions favor intellectual and language growth? What factors in the child's immediate environment are conducive to favorable language development and what factors hinder it? Does increased opportunity for muscular activity or for constructive play affect language activity and development? Is there any relationship between the amount of physical activity and language status? What is the relation of the child's language ability to that of his parents; what is the relation of his vocabulary to the used vocabulary of his parents?

What is the relation of growth in language to growth in other respects: intelligence, motor control, social attitudes, personality traits, constructive ability, physical size, and growth of various parts of the body?

To answer many of these questions, new techniques should be devised and the techniques already available be applied in new ways. There is need for studies of growth by means of systematic records on the same children from birth through the preschool period.

CHAPTER IV

STUDIES OF INTELLECTUAL DEVELOPMENT

I. Introduction

1. Meaning of Intelligence

a. Authoritative Definitions. The terms *intelligence* and *intellect* are in constant use in psychological literature, although there is not complete agreement among psychologists as to their meaning. In 1910[1] the distinction between instinct and intelligence was discussed by a group of psychologists, and each psychologist presented a different point of view. In a second symposium[2] in 1921, the question was more explicitly stated, "What I conceive intelligence to be . . . and by what means can it best be measured by group tests? For example, should the material call into play analytical and higher thought processes? Or should it deal equally or more considerably with simple associative and perceptual processes?" Seventeen prominent authorities on mental testing took part in this discussion and as many definitions of intelligence were proposed. Again in 1925, a Committee of the American Psychological Association[3] attempted definitions of these useful but elusive terms. *Intelligence* is defined as (a) ability to learn and to utilize in new situations knowledge or skill acquired in learning, (b) selective adaptation through acquired knowledge. *Intellect* is defined as (a) the capacity of conceptual knowledge, . . . (c) the capacity to analyze and discriminate objects, situations, and events with respect to relations involved in them. Here at last the words are defined, but only five of the committee subscribed to the definitions.

b. Two Points of View. In reviewing the literature on intelligence and intelligence testing, there seem to be two outstanding points of view. On the one hand, the emphasis is placed on mental processes, the capacity to analyze and synthesize on a conceptual level, or, according to Terman, "the ability to carry on abstract thought." On the other hand, mental processes, if indeed they

[1] "Instinct and intelligence." *Brit. J. of Psych.*, 3: 1910.
[2] "Symposium." *J. of Ed. Psych.*, 7: 1921.
[3] "Definitions and delimitations of psychological terms. Part III." *Psych. Bull.*, 22: 1925.

exist at all, have their expression in behavior, and behavior, alone, is open to scientific investigation. The scientific requirement of objectivity necessitates that the emphasis be placed on adjustments or adaptations in controlled situations. The study of intelligence which is based on adjustments behavioristically determined is broad enough to include problems in animal psychology; the study which attempts to treat the higher thought processes becomes synonomous with intellectual activity and as such is more strictly confined to human psychology.

Whatever the point of view one may hold as to the intelligence or intellectual activity of the adult, and the best method for its investigation, the study becomes more and more restricted to the behavioristic approach as the problems press back into the lower age-levels. The intellectual development of the infant and the young child would consequently include studies from both points of view.

c. As Used in This Chapter. For the purpose of this report, intellectual development, used in contradistinction to motor, linguistic, and emotional development, has included, in addition to the studies which purport to deal with the higher thought processes, those responses of infants which seem to be indicative of selective adaptation. These responses, from a developmental point of view, may be the precursors, even the prerequisites, of the later analysis and synthesis on the conceptual level.

2. Methods of Studying Intellectual Development

Studies of the preschool child have been made from various points of view and by various methods.

a. Biography. The biography, which was perhaps the earliest of the systematic attempts to collect data in the field of child psychology, still holds an important place, particularly in the study of infants. In addition to the biography which extends over a period of years, there are briefer accounts of one phase or another of mental development, notably that of language, but also of number concept, time, and space. This type of report, the systematic observation of one child, is highly suggestive for further more extensive studies. It also brings into developmental continuity the more detached studies on large groups of children, and is a con-

stant reminder that statistical averages are but tools by which one may express individual variations.

b. The Questionnaire. The questionnaire method, which was an early approach to child study, is rarely used at the present time, except in preliminary surveys or for accumulation of supplementary data.

c. Tests. In the studies of recent years, experimental control is stressed. The test situation, with procedure defined, may be presented to a large group of children at stated ages or the test situation may be presented to a group of children at stated intervals over several months or even years. On the basis of such data, age scales, performance scales, point scales, and the like are being developed. Although "learning" has long been considered an expression of intelligence, Kirkwood, in her study of "The learning process in young children," (22) mentions a card-sorting test and two special studies on learning. No other study with special emphasis on the learning process has been found in the literature, though many tests in which repeated trials are given offer the opportunity for such studies.

3. The Preschool Child as a Subject of Study

Occasionally one hears that the mental test situation demands the impossible of the preschool child and that the reactions of the infant are too undifferentiated for scientific evaluation, but there is more evidence to show that, with improvement in technique and in methods of expressing results, the mental life of the preschool child will offer as much, if not more, to the scientific understanding of man's adjustment to his environment as does adult man himself. In this analysis of method and analysis of results we gain a better understanding of the meaning of intellectual development, although a precise and comprehensive definition cannot as yet be given.

No attempt will be made to sketch the historical development of the concepts of adaptive behavior and of intelligence. The variations in points of view and of emphasis may be read between the lines of the abstracts of recent literature presented in this chapter.

II. Historical Outline of Research in Intellectual Development to 1920

The following bibliographic outline, chronologically arranged, epitomizes significant publications in the field prior to 1920.

1781. *Tiedemann, D.* "Memoiren," or "Record of Infant Life" (English translation).

Observations by the author of his own child during infancy.

1877. *Darwin, C.* "A biographical sketch of an infant." *Mind,* Vol. 2, pp. 285-294.

1878. *Perez, B.* "Les trois premières années de l'enfant" (translated by Christie). Sonnenschein and Co., London.
1880. "L'Éducation dès le berceau."
1886. "L'Enfant de trois à sept ans."

1882. *Preyer, W.* "Die Seele des Kindes" (translated by H. W. Brown). New York: Appleton and Co., 1889.

Containing a "conspectus showing the progress of the child by months."

1883. *Hall, G. S.* "The contents of children's minds" (reprinted). *Ped. Sem.*, 1: 1891.

1893. *Compayre, G. The Intellectual and Moral Development of the Child* (translated by M. E. Wilson). New York: Appleton and Co., 1896.

Part I. Chapters on perception, emotion, memory, imagination, and consciousness. Part II. Development of the child in later infancy.

1893. *Tracy, F. The Psychology of Childhood.* Boston: D. C. Heath, 2nd ed., 1894.

1893-99. *Shinn, M. W.* Part I. *Notes on the Development of a Child.* University of California. Pub. Ed., Vol. I (1907). Part II. *Development of the Senses in the First Three Years of Childhood.* Vol. IV.

A detailed and systematic objective record with interesting comments on mental development.

1895. *Baldwin, J. M. Mental Development in the Child and Race.* New York: Macmillan Co.

First six chapters devoted to the statement of the genetic problem, with reports of the facts of infant life and the methods of

investigating them, followed by a theory of adaptation . . . and the progress of mental development presented in detail from a genetic point of view.

1896. *Moore, R. L. Mental Development of a Child.* New York: Macmillan Co.

1898. *Taylor, A. R. The Study of the Child.* New York: Appleton and Co., 1900.

1903. *Kirkpatrick, E. A. Fundamentals of Child Study.* New York: Macmillan Co., 1909.

General psychological principles presented from a developmental point of view.

1905-11. *Binet and Simon. The Development of Intelligence in Children* (translated by E. S. Kite). Publication of the Training School at Vineland, N. J. No. 11, May, 1916.

A translation of five articles by Binet and Simon selected from *L'Année psychologique* between 1905 and 1911. The book may be considered as an historical account of the origin of the Scale and the first method of attacking the problem. The 1905 Series included tests for infants. The Scale of 1908 and the 1911 revision were later translated by Dr. Clara Towne.

1906. *Major, D. R. First Steps in Mental Growth.*

Studies based for the most part on a record of the author's son from birth to the end of the third year.

1910. *Dearborn, G. V. N. Motor Sensory Development.* Baltimore: Warwick and York.

Observation on the first three years of a child's life with a "chronologic epitome of the observed development."

1910. *Peterson and Rainey.* "The beginning of mind in the newborn." Bull. of the Lying-In Hospital of the City of New York, 7: No. 3, Dec., 1910.

1913. *Hunter, W. S.* "The delayed reaction in animals and children." *Animal Behavior Mon.*, 1913, No. 1.

1913. *Rouma, G.* "Le langage graphique de l'enfant." Misch et Thron, Paris.

An extensive study of drawings made by eight children and an extensive study of the drawings by groups of retarded and normal children.

1914. *Sully, J. Studies of Childhood.* New York: Appleton and Co.

1915. *Porteus, S. D.* "Mental tests for the feeble-minded. A new series." *J. of Psych. Asthenics,* 19: No. 4, June, 1915, 200-213.

For more recent variation of the maze tests, see No. 37.

1915. *Sheffield, H. B. The Backward Baby.* (A treatise on idiocy and the allied mental deficiencies in infancy and early childhood.) Rebman and Co.

1915. *Tanner, A. D. The Child, His Thinking, Feeling and Doing.* New York: Rand McNally and Co.

1916. *Simon, Th.* "Questionnaire for the observation of a young child from birth to two years of age." (*Bull. de la Société Libre pour l'étude psychol. de l'enfant,* No. 108, 16 Année, No. 2, 1916) Translated by Peymert. *Ped. Sem.,* 27: 1920.

1916. *Stern, W.* Die Intelligenzprüfung an Kindern und Jugendlichen." *Fortschritt auf dem Gebiete der Intelligenzprüfung.* Leipzig, Barth.

A revision of the Binet-Simon tests.

1916. *Terman, L. The Measurement of Intelligence.* Boston: Houghton Mifflin, 1910.

1917. *Blanton, M. G.* "The behavior of the human infant during the first 30 days of life." *Psych. Rev.,* 24: 1917, 456-483.

1917. *Freeman. How Children Learn.* Boston: Houghton Mifflin.

1917. *Pintner and Patterson. A Scale of Performance Tests.* New York, Appleton and Co.

For supplementary data on children below five years, see No. 19.

1918. *Ide, G. G.* "The Witmer form-board and cylinder as tests for children two to six years of age." *Psych. Clinic.,* 12: 1918, 65.

1918. *Mateer, F. Child Behavior.* Boston: Badger and Co.

A critical and experimental study of young children by the method of conditioned reflexes. For discussion of conditioned reflexes, see Pavlov, I. P., *Conditioned Reflexes* (trans. by Anrep, G. T.), Oxford University Press. For experiments more particularly with children, see Gantt, "Pavlov's work," *Arch. Neur. and Psychiat.,* 17: 1927, 514-528.

1918. *Bühler, K.* "Geistige Entwicklung des Kindes." Gustav Fischer, 4th edition, 1924.

1920. *Rasmussen, V. Child Psychology.* Glydendal, London. Vol. 1, "Development in the first four years." Vols. 2 and 3, "The Kindergarten Child, Thought, Imagination and Feeling, Will and Morale."

Observations made by the author on his own children are presented from a developmental point of view.

III. Survey of Recent Research in Intellectual Development

1. Arlitt, A. H. *Psychology of Infancy and Early Childhood.* New York: McGraw-Hill Book Co., 1928.

In the words of the author, "this book has been written for the purpose of presenting those principles of psychology derived from early studies and the material drawn from later researches, that they may be used by parents, teachers, and others interested in young children." The book serves as an introduction to a study of the problems presented by the preschool child. There are a few separate chapters on memory, imagination, the thinking process, drawing, and other forms of expression, but for the most part, the intellectual development has been considered in relation to the total behavior of the child.

2. Baldwin, B. "The Mental Development of Children." *Psych. Bull.*, 20: Dec., 1923.

A review of the methods of child study and a bibliography of 134 references.

3. Baldwin, B. T., and Stecher, L. *Psychology of the Preschool Child.* New York: D. Appleton and Co., 1924.

Problem: To obtain by observations and experiments on normal children, further data on the development of the preschool child.

Subjects: One hundred five normal and superior children from 2 to 6 years from the preschool laboratory of Iowa University. Average I.Q. of the girls was 116, average I.Q. of boys 113.

Method: In addition to the more familiar picture-completion and form-board test, vocabulary tests, tests for color, discrimination, weight, time, and several tests of number concept were given. Tests of motor coördination, such as Wallin Peg Board, perforation test, walking boards, Montessori frames, and tracing path, were also given.

Results: The performance on these tests has been correlated with the results from Stanford Binet, and Detroit Kindergarten Tests. The physical development is discussed and correlations made between mental age and height, weight, and carpal bone area. These results from the 2-, 3-, 4-, 5-, and 6-year groups furnish supplementary data on many of the familiar tests and tentative norms for a number of additional tests

above two years. The variations in testing for number concept are particularly interesting. "Practically all the tests employed to determine the development of the children could be used to train the abilities tested. . . . . Practice has an enormous effect on these abilities in young children and the difference between some children may have been due in large measure to home training."

4. Bayley, N. "Performance tests for three-, four-, and five-year-old children." *Ped Sem.*, 33: 1926.

Problem: To gather data on reliable tests for children under six years.

Subjects: One hundred six children whose ages ranged from 2 years, 9 months, to 6 years, 8 months.

Method: Eight tests were devised and tried. The tests are (1) formboard, (2) auditory memory for digits, (3) visual memory, (4) picture perception-drawings, (5) naming of objects, (6) directions, (7) sorting, and (8) mannikin—two wooden dolls, one complete for sample, the other in parts.

Results: The partial standardization indicates that these tests with modifications suggested by the author would repay further experimentation.

5. Burnham, W. H. *The Normal Mind.* New York: D. Appleton and Co., 1926.

In the first 200 pages, the conditioned reflex is discussed from a physiological and psychological point of view. Considered as a fundamental principle in behavior and the basis of mental life, its significance for the normal development of children is clearly outlined.

6. Brainard, P. "Some observations of infant learning." *Ped. Sem.*, 24: 1927, 231-254.

Problem: The development of an infant through the first year of life.

Subject: The author's daughter.

Method: Daily, "almost hourly," personal observation, and repeated presentation of test situations suggested by Gesell, in *The Mental Growth of the Preschool Child,* supplemented by observations on other infants.

Results: Many items for observation are suggested and the developmental patterns in reaching, walking, and talking for this one child have been given in detail.

7. Cunningham, K. S. *Measurement of Early Levels of Intelligence.* Teachers College, Columbia University. (Contributions to Education, No. 259, 1927. 74 pp.)

Problem: To measure the "CAVD intelligence" of young children (see Thorndike, *The Measurement of Intelligence*) and compare the

performance on this test by a group of imbeciles with the performance of normal children of equivalent mental ages.

Subjects: 257 normal children from public schools, day nurseries, and private schools. Age range from 2½ to 5½ years.

Method: Levels A to E of the CAVD scale (completion-arithmetic-vocabulary-directions) were used in the examination of the children. The Stanford-Binet examination was also given to 103 of them, and the Binet or Kuhlmann I.Q. was available for 16 additional cases from previous examinations.

Results: The total CAVD score and the Binet M.A. gave a correlation of .925. The correlation for the Vocabulary and the Binet was .79; correlations for Completion, Arithmetic, and Directions taken separately with the Binet were above .80. The comparison of the normal children with the imbeciles was made on the basis of total scores, on the percentage of successes in the four divisions of each level, A to E, and on the individual items. A great many interesting questions in regard to the growth of intelligence are raised.

8. Descoeudres, A. *Le développement de l'enfant de deux à sept ans.* Delachaux and Nestlé, S. A., 1922.

Problem: To evaluate experimentally tests published by Dr. Decroly in L'École Nationale (1913) and others devised by the author, in order that the intellectual level of young children might be more precisely defined.

Subjects: 300 children divided into two groups, from the average and favored homes.

Method: Each child was questioned individually. Language tests, to gain an estimate of total vocabulary, formed a large part of the task. The power of observation, number concept, and judgment were investigated by a number of tests chiefly verbal in type.

Results: The tests are standardized separately for each environmental group and arranged in an age scale from two to eight years.

9. Fenton, J. *A Practical Psychology of Babyhood.* Boston: Houghton Mifflin, 1926.

Problem: A psychological study of the development of a child from birth to two years.

Subject: Author's son.

Method: Daily observations, systematically recorded and arranged to provide cross sections of behavior at frequent age-intervals, and developmental items relating to aspects of behavior, seriated over relatively long periods.

Results: A concise, objective developmental record is given of the individual subject, with suggestions for obtaining an analytic record of the development of other children.

10. Foster, J. O. "Verbal memory in the preschool child." *Ped. Sem. and J. of Gen. Psych.*, 35: 1928, 26-44.

Problem: "The present study is concerned with the learning and reproduction of sensible prose material by very young children."

Subjects: Thirty-one children attending a nursery school. The I.Q.'s of the group ranged from .95 to 1.48 on the Kuhlmann-Binet Scale, with an average I.Q. of 119.6.

Method: The material consisted of eight stories, with the number of words ranging from 388-472. On the first presentation a story was read with no pauses. On later days, the reader paused at certain definite places (about forty to a story), looked expectantly at the child, and waited for about 10 seconds. A recorder, meanwhile, kept an exact record of everything the child said. The record gives the total number of words, the greatest number of words given in any one repetition, and total number of different words given by the child.

Results: The number of words given by the child is studied in relation to chronological age, mental age, and sex. The effect of massed repetition and a qualitative analysis of words are presented.

11. Gambrill, B. L., and Farwell, L. *An Analytical List of Kindergarten Primary Tests of Intelligence and Achievement.* Whitlock's Book Store, New Haven, Conn.

The authors have assembled an analytic list of tests for use in kindergarten and first three grades, covering the chief group tests in use up to June, 1927. "The analysis covers the following items: name of test, types and forms available; by whom devised; number and nature of test items; norms and standards, character and source; grade or age-range covered; time (so far as it could be obtained or estimated); publisher; dates of copyright; prices, verified to June, 1927."

12. Gates, A. I., and Bocker, E. "A study of initial stages in reading of preschool children." *Teachers College Record*, 24: 1923, 469-488.

Problem: To analyze the means by which inexperienced children learn words.

Subjects: Children in a kindergarten of a public school, varying in age from 5 years, 5 months, to 6 years, 1 month.

Method: Nine lists of 6 words were selected to give a variety of types of configuration; lists of 3- to 10-letter words and one list of mixed lengths were used.

Results: The authors discuss the factors which might influence the difficulty of learning. Incidentally, they secured information on the optimal length of a study period, the development of the ability to learn words through practice, and the permanence with which words were retained.

13. Gesell, A. G. *The Mental Growth of the Preschool Child.* New York: Macmillan Co., 1925. 441 pp.

Problem: As stated in the subtitle, "a psychological outline of the normal development from birth to the sixth year including a system of developmental diagnosis."

Subjects: Fifty children at 4, 6, 12, 18, 24, 36, 48, and 60 months within two weeks of the age designated. The children have been described as normal; definitely feeble-minded children were excluded.

Method: The children were examined individually by test situations with standardized procedure, supplemented by items of behavior dependent on more naturalistic observation and inquiry. The tests, or items, are classified in four groups: motor, language, personal-social, and adaptive behavior. In the last group are found the items which bear most definitely on what may be considered intellectual development. The findings were tabulated, percentage frequencies calculated, and letter ratings assigned.

Results: The schedules provide concrete, descriptive, and analytic records of development. The items have normative value in relation to the frequency with which a particular response occurs in a given age-group, but no attempt has been made to construct a measuring scale on a numerical summation of credits. The evaluation of the data demands psychological knowledge and experience with many children.

14. Gesell, A. G. *Infancy and Human Growth.* New York: Macmillan Co., 1928.

Problem: To give objective expression to the course, the pattern, and the rate of mental growth in normal and exceptional children by a method of systematic observation and record.

Subjects: Infants, examined in connection with clinical and research work. Fifty percent were examined before they were nine months, eighty percent before eighteen months. A small number, over forty-eight months in age, who were seriously retarded, rated at a mental level of less than two years.

Method: The procedure in the test situations follows that outlined in the preceding reference. Using the earlier normative data as points of departure, a syllabus of 195 behavior items has been drawn up. The items are graded on the basis of fifteen age intervals—1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 15, 18, 21, and 30 months. These normative summaries are analyzed into *motor, language, adaptive,* and *personal-social* behavior. A record of such behavior is considered an expression of mental growth. "The term *adaptive behavior* approximates the term *intelligence,* but cannot be made strictly equivalent."

Results: Ninety studies, aggregating 429 examinations, are summarized to determine "the tempo and trend of development." The data indicate a high degree of consistency in the course of early mental

growth. Examples of deviations are presented in some detail. "It is best to rely on cumulative prediction through the method of seriated examination, and let consistency of the series rather than the single examination shape the prognosis."

15. Goodenough, F. *Measurement of Intelligence by Drawings.* Yonkers: World Book Co., 1926.

Problem: To determine the extent to which the nature of drawings made by children in their early years is conditioned by their intellectual development.

Subjects: 3593 children ranging in age from 4 to 10 years made drawings for the final standardization.

Method: A man was chosen as subject for the drawing. From a preliminary analysis of 100 drawings a rough scale of about 40 separate "points" was devised.

Results: Five revisions of the scale have been made to fulfill three fundamental requirements. The correlation between the Stanford-Binet mental age and drawing was .74. The author discusses the psychological implications in an analysis of the drawings.

16. Goodenough, F. *Kuhlmann-Binet Tests for Children of Preschool Age.* University of Minnesota Press, 1928. 146 pp.

Problem: To secure further data on the reliability of the Binet tests for children of preschool age and to make an experimental investigation into certain theoretical reasons for their unreliability.

Subjects: A total of 495 children ranging in age from 18 to 54 months. In a smaller group for intensive study, considerable effort was made to secure a sampling representative of the total child population of Minneapolis.

Method: The Kuhlmann 1922 revision (see No. 25) was used. The reliability of the scale as a whole was considered by three methods: change in I.Q. from first to second test, correlation between the two tests, and correlation between half scales. The separate tests were treated with reference to (1) placement in year group, (2) their reliability as indicated by changes in success from first to second examination, (3) internal consistency of the scale, and (4) the motivating power of the various tests.

Results: In general, the data give the encouraging correlation of .81 between original test and retest, but also a warning in use of the scale as a predictive instrument in its present form. The author shows that individual test items are misplaced; hence the lack of validity of many interpretations which are now placed upon shifts of intelligence quotients in preschool level. There is a relationship between occupation of the father and intelligence level of the young children.

17. Hallowell, Dorothy K. "Mental tests for preschool children." *Psych. Clinic,* Vol. 16: Nos. 8-9.

Problem: To secure additional data in the field of preschool tests.

Subjects: 650 children from 12 months to 47 months of age, inclusive.

Method: In a single examination the following tests were presented in addition to the Stanford-Binet and Gesell Tests: Disc form-board, Figure form-board, Witmer form-board, Pegs A, B, C, and D, color matching, and memory span for digits. Many of the subjects were reëxamined for periods ranging from one to four years, which meant that each case had at least two psychological examinations and some had as many as five.

Results: In addition to the very considerable normative data, the author reports a high reliability on retests; 75 percent showed consistent ratings.

18. Herring, J. P. *The Herring Revision of the Binet-Simon Tests.* Yonkers: World Book Co., 1926.

A manual for the measurement of mental ability by a point-scale method. The examination consists of 38 tests for the most part of verbal type. A score on the examination as a whole is the sum of the scores obtained for the separate tests. A table is given showing the mental age equivalents of each total score. The author states that the mental age has the same meaning and significance as the mental age obtained by the Stanford Revision and that with adequate technique one may expect to obtain a correlation of .97 with the Stanford. Fifty-one months is the lowest mental age equivalent given.

See "Herring Revision of the Binet-Simon Tests and Verbal and Abstract Elements in Intelligence Examinations," Yonkers: World Book Co., 1924, for details of construction and correlations representing validity and reliability.

19. Johnson, B. J. *Mental Growth of Children in Relation to Rate of Growth in Bodily Development.* New York: E. P. Dutton and Co., 1925. 160 pp.

Problem: To accumulate data concerning the mental growth of children and study it in relation to the rate of growth in other phases of bodily development.

Subjects: Children forming nucleus of the study came from the City and Country School affiliated with the Bureau of Educational Experiments and the Nursery School of the Bureau. The age range is from 16 months to 16 years. Additional examinations were made on children in public and private schools. Total number of cases, 571; 299 cases between two years and six years, 11 months.

Method: Individual examinations by the Stanford-Binet. Supplementary tests were as follows: Mare and Foal, mannikin, four form-boards, Knox Cube, Ship test, Witmer Cylinder, Rossilimo pictures, Action-Agent (Woodworth and Wells), and ink-blot tests. The physi-

cal examination included height, weight, hand grip, blood pressure, and pulse rate.

Results: There was no significant relationship between the mental age of a group of the same chronological age and weight, height, the absolute blood pressure, or the pulse rate. As Pinter and Patterson give but a few scores below five years, the additional data on the performance tests have considerable normative value.

20. Johnson, B. J., and Schriefer, L. "A comparison of mental age scores obtained by performance test and the Stanford Revision of the Binet-Simon Scale." *J. of Ed. Psych.* 13: 1922, 408-418.

Problem: To evaluate the scores made by the same group of children on a performance scale and the Stanford-Binet.

Subjects: Group of 86 children, age-range from 3 to 9.8 years. The Stanford I.Q.'s range from 96 to 167, with an average of 114.3.

Method: Various tests were presented according to the procedure outlined in Pintner and Patterson Performance Scale.

Results: Scores are given for each age-level. The authors conclude that errors and moves are unsatisfactory measures on account of lack of differentiation between the ages and the difficulty of recording.

21. Jones, M. C. "The development of early behavior patterns in young children." *Ped. Sem.*, 33: 1926, 537-585.

Problem: To determine age-norms and the period of development for a group of early behavior patterns.

Subjects: 365 cases within the first year of life, studied for a period of eight months.

Method: Systematic observations were made on the following reactions: smiling, eye coördination (horizontal), eye coördination (vertical), eye coördination (circular), blinking, head support, thumb opposition, reaching, sitting, Babinski reflex. A total of 735 examinations (about two for each child) was made.

Results: Children were grouped in age intervals of 10 days, and a plus or minus record was made of whether or not a particular response was elicited. From a smoothed curve, percentiles were computed. Suggestions are given for various ways of using the data for normative purposes.

22. Kirkwood, J. A. "The learning process in young children." Studies in Child Welfare. Vol. III, No. 6, 1926, 107 pp. (Published by the University of Iowa.)

Problem: To study experimentally the psychology of the learning process in young children.

Subjects: 203 children from a preschool laboratory and five public kindergartens. Age range from 1 year, 6 months, to 6 years and 5 months. Mental age range from 3 years, 8 months, to 8 years, 8 months.

Method: Twenty small wooden blocks of geometrical design and 20 simple outline pictures were used. The learning involved the formation of a correct association between each picture and a block shaped like it.

Results: The average number of trials required for learning by the preschool children is reduced almost one-half by the kindergarten children. Presentation of the material on alternate days resulted in greater economy of learning than presentation on successive days. The number of trials necessary for complete learning correlates better with mental than with chronological age. There is no significant correlation between this number of trials and the scores on the Goddard-Seguin form-board test, mannikin test, or Montessori cylinders test.

23. Koffka, K. *The Growth of the Mind.* (Translated by R. M. Ogden.) New York: Harcourt, Brace and Co., 1924.

Problem: To work out some of the chief principles of genetic and comparative psychology, laying special emphasis upon the evolution of the child's mind.

Methods: In the first part of the book the author reviews the methods of child study and presents a survey of the behavior of the infant as an object of natural scientific observation. He then proceeds to a characterization of the early beginnings of consciousness with an interpretation in terms of *Gestalt* psychology. He states that mental development can be differentiated roughly in four directions, motor phenomena, sensory experience, the motor sensory coördination, and ideational behaviour. Various phases of mental development such as color-vision, spatial factors, sensori-motor learning, imitation, ideational learning, and number configuration are considered. Observations reported by Miss Shinn and the Sterns and the experiments of Bühler provided illustrations for the principles of *Gestalt* psychology in the field of child development.

24. Kohs, S. C. *Intelligence Measurements.* New York: Macmillan Co., 1923.

Problem: To evaluate the results of an experiment designed primarily to test the power of analysis and synthesis.

Subjects: 367 between 4 and 16 years, 20 to 30 children at each age.

Method: Sixteen one-inch cubes with 6 sides variously painted are presented to the subject, who is asked to copy with the blocks, designs of differing degrees of difficulty drawn on cards.

Results: 17 designs are graded in difficulty, with time-limit for each design. An interesting discussion of intelligence and the various methods of standardization of tests is added. His final standardization includes a year scale and a point scale.

[Note: The tests were in general too difficult for children under five years, who were presumably unfamiliar with the blocks, but a larger number of preschool children are now familiar with block designs as

occupational material, so that the value of the tests for the younger ages is questioned.]

25. Kuhlmann, F. *A Handbook of Mental Tests.* Baltimore: Warwick and York, 1922. 208 pp.

Subjects: Children below school age secured chiefly through baby contests and from kindergartens of the public schools. Variable number at each age level. Over 7000 children were used in standardization of the whole scale.

Method: Over 100 new tests were tried out, usually on inmates of a school for the feeble-minded whose mental ages by previous tests were already known. Explicit directions are given, with procedure similar to that of the original Binet.

Results: Extension of scale downward to 3-month level; increase in number of tests at each age, and in accuracy of placing.

26. Lippman, H. S. "Certain behavior responses in early infancy." *Ped Sem.*, 34: 1927, 424-440.

Problem: To study the ability of the infant to accept one, two, and three objects. Special attention given to the circumstances which appear to facilitate or inhibit the performance.

Subjects: 178 infants from two infant welfare stations, ranging in age from 4 to 18 months.

Method: The "three-cube situation" as described by Gesell (No. 13) was presented under varying conditions. A systematic record of the following reactions was made: (1) acceptance of an object, (2) acceptance of a second object, (3) acceptance of a third object, (4) early reactions, (5) purposeful shifting, (6) crying, (7) interest and attention, (8) ability to hold head erect, and (9) handedness.

Results: The method of accepting a first, second, and third object is described. Curves and tables showing the percentages of acceptance at stated ages are presented.

27. Meek, L. H. "A study of learning and retention in young children." *Teachers Col. Contr. to Ed.*, No. 161, 1925.

Problem: To study the effects of certain selected factors upon learning of young children in connection with reading.

Subjects: 71 children from a kindergarten and a nursery school, divided into 4, 5, and 6-year groups. Median I.Q. for each group was 120, 125, and 119.5, respectively.

Method: The factors studied were varying amounts of initial practice, varying amounts of later practice, and similarity of associated words.

Results: The data obtained are analyzed to show the effects of the practice and the improvement in ability to learn. The cues used by children in learning to recognize words are discussed.

28. Peiser, J. "Prüfungen höherer Gehirnfunktionen bei Kleinkindern." *Jahrbuch f. Kinderheilkunde,* 91: 1920, 182-200.

Problem: To devise tests suited to young children.

Method: The test situations are described and examples given of type of solution which may be expected by children of preschool age. The tests deal primarily with variations of the possible methods of securing objects placed out of reach of the subject, similar to the experiments used by Kohler with the apes. A few tests based on ability to discriminate form and color have been added. A tentative age-scale from one year to six years is proposed.

29. Piaget, J. *The Language and Thought of the Child.* (Trans. by M. Warden) New York: Harcourt, Brace and Co., 1926.

Problem: "What are the needs which a child tends to satisfy when he talks? This problem is, strictly speaking, neither linguistic nor logical. . . . . it belongs to functional psychology."

Method: Piaget has developed the "clinical method," which consists in letting the child talk and in noticing the manner in which his thoughts unfold. In the preliminary work two persons followed each a boy, approximately 6½ years old, for about a month, taking down in detail and in its context everything said by the child through all the play and occupational activities, when alone or in a group of children. The sentences were numbered and classified into elementary functional categories. This preliminary work was followed by a study of the understanding and verbal explanations between children between years six and seven and years nine and eleven. In addition, 1125 questions asked by a boy between 6 and 7 years in a period of ten months were noted.

Results: The conversation is divided into two large groups, egocentric and socialized. In the first group fall repetition and monologue, dual or collective (addressed to an outsider who is expected neither to attend nor to understand); in the second group fall adapted information, criticism, commands, requests, and threats, questions, and answers. The material is treated statistically to show the proportion of egocentric to socialized. The child under seven thinks egocentrically even in the society of others. This conclusion is checked by the analysis of the language of 20 children whose remarks were recorded in the same way.

"What is?" and "When?" are admittedly earlier than "Why?" "At about three years old the child takes cognizance of the resistance set up by things and people. . . . The earliest 'whys' are generally in connection with human actions . . . . the later questions concern logical justification. Questions of definition are at first utilitarian and then become increasingly logical."

In his "La representation du monde chez l'enfant," (Paris. Felix Alcan, 1926) the results of further study by the same method are presented.

30. Schwab, Georg. "Prüfung des psychischen Zustandes und Entwicklungsganges von Kindern bis zum dritten Lebensjahr." *Jahrbuch f. Kinderheilkunde,* Vol. 107, p. 86.

Problem: To arrange a series of tests which would serve as an extension of the Binet-Simon Scale in the lower age levels.

Method: Selection of tests from experimental research and personal experience with young children. A varying number of tests, 7 to 9, for each age level—at birth and at 1, 2, 3, 6, 9, 15, 18, 24, 30, and 36 months.

31. Sherman, M. and I. C. "Sensori-motor response in infants." *Arch. of Neur. and Psychiat.,* 12: 1924, 245-247.

Problem: To study the reflexes and early habit-formation in infants.

Subjects: 96 infants, ranging in age from one hour to twelve days.

Method: Systematic observation of the responses of infants to specific situations, including the plantar and pupillary reflexes, response to sticking with needle, early habit-formation of defense movements of the arms, coördination of the muscles of the eyes.

32. Strasheim, J. J. *A New Method of Mental Testing.* Baltimore: Warwick and York, 1926.

Problem: To devise a series of test situations which would demand for their solution the eduction of relations and correlates (in accordance with Spearman's definition of intelligence).

Subjects: Thirty children from 4¾ to about 10 years selected by their teachers as "bright" and "dull."

Method: By explanation and demonstration the fundaments are presented. The child is then tested as to his ability to use these fundaments in new situations.

Results: In the analysis of the tests and the interpretation of the responses, the author finds support for his theory that growth of intelligence consists mainly in the ability to educe 'higher level' relations. The children under six were not able to solve the situation. By simplifying the situations, the method could be applied to the younger children. It is more definitely intellectual than the majority of test problems for the lower ages.

33. Stutsman, R. "Performance tests for children of pre-school age." *Genetic Psych. Monog.,* 1: 1926, 1-67.

Problem: To devise and standardize tests suitable for children of preschool age.

Subjects: Total number 529, ranging from 18 to 66 months. Effort was made to obtain a group representing the average.

Method: Children examined individually, chiefly in the morning, and not over 45 minutes. In addition to the more familiar tests, the following test situations were presented: the child is asked to replace 16

color cubes in the box, to arrange a nest of hollow cubes, to build a pyramid of three cubes and one of six cubes, to complete very simple picture puzzles, to match pictures in the Decroly Matching Game, repeat words and word groups, answer simple questions and respond to the action-agent test.

Results: In a large number of tests the score is given in time and success. The data are presented in deciles for half-year age-groups. The material is interesting to the children and offers a relatively wide range of testing.

34. Watson, J. B. "What the nursery has to say about instincts." *Ped Sem.*, 32: 1925, 293-326.

A brief report of observation on several hundred infants from birth through the first thirty days of infancy, with a summary of the author's earlier work on the "unlearned responses."

(See also Watson, J. B. and R. R. "Studies in infant psychology," *Sci. Mon.*, 13: 1921, 493-515.)

35. Woolley and Cleveland. "Performance tests for 3-4-5-year-old children." *J. of Exp. Psych.*, 6: 1923, 58-68.

Problem: To secure data on tests suited to children of preschool age.

Subjects: 150 children from a nursery school, day nurseries, and kindergartens.

Methods: Test material consisted in the Montessori pink tower, a series of ten blocks decreasing in size to be piled in a tower, and the Montessori cylinders.

Results: The time in seconds for completing each series is presented in percentiles. The scores on the performance tests are correlated with the Stanford mental age for 20-25 cases for each age group. In every group the chronological age gives a higher correlation with the performance test than the mental age. The tests were considered satisfactory and have been included in the performance tests used by Stutsman (33).

36. Yerkes, R., and Foster, J. *1923 Revision: A Point Scale for Measuring Mental Ability.* Baltimore: Warwick and York, 1923.

Problem: To construct a measuring scale for intellectual ability intended for subjects over a range of mental age from 3 to 16. The formulation of a point scale which could be used with children under seven years of age is treated in Ch. VI.

Subjects: 650 children from 3 to 7.9 years, mostly from the kindergartens and the first three grades of the public schools.

Method: The Point Scale is an intellectual examination on the principle of a scale of tests graduated by credit-points. The results of the examination are expressed in total scores ranging between 0 and 100.

The Infant Scale consists of 22 tests largely verbal in type. Tests were derived from various sources, but material from Binet predominates. Analogies in simple form make an interesting addition.

Results: Tentative norms are given for ages from 3 to 5. Scores may be transferred into mental age ratings or may be directly interpreted by reference to a table of norms.

37. Young, H. "Slot Maze A." *Psych. Clinic,* 14: 1922, 73-82.

Problem: To provide a test on the principle of the pencil and stylus mazes which shall eliminate negative instruction.

Subjects: 1304 children from 4 to 9 years.

Method: The pattern of the maze is cut out in such a way that a 'slider' can move freely within the slot. The children are instructed to take the slider to the center as quickly as they can.

Results: Data on the time in seconds of the first and second trial are presented in percentiles. The test has been considered useful in testing children four to ten years.

IV. Research in Progress

1. Institute of Child Welfare, University of Minnesota

The most important project is *a standardization of the Minnesota Test for young children.* This is a test modeled on the Kuhlmann-Binet and based in large part on Dr. Goodenough's evaluation of the Kuhlmann-Binet (see No. 16). Preliminary studies of the test indicate that it has a reliability between .90 and .95. The test will appear in two alternative forms which are well equated. Our studies have shown that it is possible to develop a scale for young children which on the basis of statistical criteria is as good as any scale for children between the ages of six and twelve.

Eunice Snyder is studying the *effect of repeated examinations upon mental test scores of young children.*

Dr. Edith Boyd and Mary Shirley are making a detailed study of *the physical and mental development of a group of twenty-four infants from birth to one year.* This is an intensive study with weekly examinations and careful records kept by mothers.

2. University of Toronto

Langstaff and Blatz are making an *analysis of the learning process in infants* which is a duplication of Kohler's work and technique with the chimpanzee.

3. Psychological Laboratory, Johns Hopkins University

An article by Dr. Mildred Dorcus on *the perception of form and design* as it occurs in the Rossolimo Picture Test includes records for some children under five and is to be published in the *Journal of Genetic Psychology.*

4. Institute of Child Study, University of California

A study is now in preparation by Adele Jaffa, entitled *Growth Rhythms in Mental Test Traits* at 3 to 6 months' intervals by Gesell, Merrill-Palmer, and Minnesota preschool scales. Performance in individual items, studied cumulatively, has been analyzed with reference to the norms of each item. Fluctuations in individual records have been studied with a view to tracing possible causative factors. The age-range is 18 months to 5 years.

5. Yale Psycho-Clinic

Research members of the staff, including Professor H. M. Halverson, Dr. M. C. Putnam, Dr. Helen Thompson, Miss Ruth W. Washburn, and Dr. Arnold Gesell, are engaged in normative studies of carefully selected infants at intervals of four weeks. The lunar month has been adopted as preferable to the solar month for the scientific treatment of developmental data and for diagnostic criteria. The work is planned to furnish systematic specifications of behavior increments and of behavior patterns throughout the first year of life.

6. Iowa Child Welfare Research Station

"Since 1921 we have conducted as part of the regular program of the Research Station some 50 different experiments or series of experiments, many of which have been repeated from year to year, giving us approximately 21,000 individual records for analysis. Of this number about half of the experimental situations have been originated in our laboratories and the others have been modified or adapted for preschool children from those devised by other workers for older children. The nucleus of experiments devised by Dr. Baldwin and Dr. Stecher in the first years of the laboratories and reported in the *Psychology of the Preschool Child* (see No. 3) has been repeated, amplified, elaborated, and extended. The Station has been particularly interested in consecutive studies of individuals over a period of years and in repetition of the same experiments from year to year wherever possible."

Miss Harter's study *of the reasoning processes of preschool children,* just completed, aims to present experimental evidence on the reasoning of preschool children.

Constance Newell's unpublished master's thesis on "The value of the form-board for the mental measurement of young children" classifies the form-boards used in the past into groups on the basis of the problem situation presented; treats of the application of the test to preschool children, and analyzes the results in regard to relationship of the factors of performance to age, sex, and mental age.

V. Summary and Discussion

1. The Scientific Requirements of Methods of Studying the Intellectual Development of Young Children

In general the research problems which have been reported have been directed toward the better understanding of the "intellectual development" of the preschool child. The methods employed have been governed by the scientific requirements of objectivity, reliability, and discriminative capacity, or validity.

a. Objectivity. It has been customary to secure objectivity through the control of procedure in presenting the stimulus and in the method of recording results. As to the control of the subjects, an animal submits to the experiment or is discarded; an adult, and even a school child, can usually be persuaded to cooperate in the experiment though the immediate results of the test are not in themselves of interest. The procedure is made as unvariable as possible; the response, when possible, is recorded by the subject, sometimes through the use of delicate apparatus, often with the pencil.

In work with the preschool child, however, it has been found that coöperation must be gained and retained by the immediate stimulus of the test-situation itself, and, with the exception of drawing and a few performance tests, the responsibility of recording falls on the examiner. Consequently, a more naturalistic approach has been recognized as essential. Variation in coöperation and in technique of procedure and recording of results must be met by increasing the number of cases. Recently in the effort to obtain an objective record the moving picture camera has been employed. Added to this device for recording response, an observation dome like that described by Dr. Gesell (see No. 14) is of great assistance by leaving one or many observers free to record all movements of the child, who is undisturbed by their presence. This word picture, added to the moving picture, serves the purpose of a permanent record for study. The record of the camera and the pen, however, is but the initial step in the task, for the data must be systematized, if they are to be scientifically evaluated. In the systematization of data, the judgment of the person selecting the items for study plays a leading rôle. The camera and the observation dome have in a measure postponed, but have not eliminated personal opinion.

It should be remembered that a demand for objectivity, if it requires an inflexible procedure and method of recording, may be in conflict with naturalistic conditions. Psychological investigation demands a special psychological technique; it does not demand the elimination of personal judgment—which is impossible—but the recognition and clearer statement of its part.

b. Reliability. Reliability, the second requirement, is based on objectivity. The reliable test is the test which can be so objectively defined that when the conditions are repeated, the same response is obtained. Granted that conditions can never be exactly duplicated, the essential relationship remains similar in the case of adults and older children, so that for practical purposes we can repeat the tests and expect similar results. In the case of the infant, the degree to which a test produces the same results may be an index of its lack of discriminative capacity. Reliability, in the sense of the same results under the same conditions, is in conflict with the fundamental concept of rapid growth. In addition to the effect of the maturation of the nervous system, which would affect the behavior patterns, we have the uncontrolled factors of adjustments to strangers, the variable attitude toward test material, the effect of rapid learning, and, even within the examination period, changes in emotional states due to physiological conditions—lacking food and sleep the child may become irritable; well fed he may become unreactive; during teething he may take all material to his mouth. Consequently, the single test, particularly in the case of infants, is essentially unreliable in the ordinary sense of that term. With somewhat older children, those of nursery-school age, Goodenough finds a reliability of a total scale to be .81, but again the single tests vary as to consistency of results.

Accepting reliability, objectivity, and the preservation of rapport as desirable factors in test-situations, performance tests have proved to be the most satisfactory. Throughout the literature we find references to the fact that child who is inhibited in situations requiring speech and in those which direct his attention toward himself may become actively responsive in the manipulation of the performance material. Effort has consequently been made to increase the number of performance tests.

In addition to the imperfect standardization of the Binet test in the earlier age-levels, there is repeated criticism that the ma-

jority of the tests depend on the understanding and use of language. If these tests should destroy rapport, obviously, they would have very limited use in an investigation. Cunningham (7), who has used the CAVD scale, which is primarily verbal in type, reports that the scale suffers far less from this weakness of unattractiveness than one would expect and that "the directions test very seldom fails to attract and hold the child's interest, owing to its opportunity for the use of pencil and paper. The completions test at times loses interest for the child, but not as a rule until he has reached levels where he is out of his depth . . . . it may be doubted whether such factors of uncertainty, even if more frequent in the case of the CAVD tests, are not more than counterbalanced by its more searching character." In considering the intellectual development of the preschool child, we are faced, then, with the possibility that certain aims of objectivity and reliability may be in conflict with validity.

c. Validity. The validity of a test is its discriminative capacity. Owing to the difficulty of defining intellectual development in satisfactory terms, one is tempted to report the conditions of a test and the results with little or no interpretation. A review of the literature as to differences between animals and man, infant and child, child and adult, the dull and the bright, gives suggestions for working hypotheses. For those who are working on the hypothesis that the understanding of language is fundamental to intellectual development, success on performance tests is not convincing evidence of differentiation on an intellectual level. Tests which are based on the comprehension of language, such as the tests used by Cunningham, more particularly comprehension, arithmetic, and directions, must be equally stressed with performance tests until one is certain that the performance tests are as discriminating. It would be a misfortune if the opinion that performance tests are better suited to the preschool child from the point of view of objectivity and reliability should destroy initiative in the investigation in the field of comprehension and use of language. Already we have a number of tests in preliminary stages of standardization, but for the most part they are suited to the child of nursery-school age. What of language tests for infants? In the case of the infant early conditioning to situations in which language has a part may be investigated even in the first months of life. There are a few

tests or parts of tests which give us data on these points and the biographies are full of suggestions for wider investigation. If one should overemphasize the tests which require motor response, one is faced with the predicament that a motor handicap may be present and not be recognized. In the examination of 26 cases of quadreplegia, the motor condition in 20 of the cases was not definitely noted until the child was over 12 months old.

Although the dissatisfaction with teacher's opinion and school progress as an index of intelligence gave the impetus to the widespread testing program, the usual method of showing validity in intellectual tests is by correlation with such ratings. The value of such correlation need not be discussed here, as there is no such criteria for the majority of preschool children. Other criteria of validity must be set up.

2. Possibilities for Improvement in Methods

a. Repeat Examination. In consideration of the difficulties in obtaining objectivity, reliability, and validity in the tests of preschool children when contrasted with tests for older children and adults, one would do well to review some of the assets which are peculiar to the preschool child. The scientific value of a large number of cases on which to base one's conclusions is too obvious for mention, but the feasibility and value of the repetition of examination on the same case have been indicated but not emphasized. In the first place, there is considerable agreement that in the standardization of tests in the preschool years, age-levels of a year, and even of a half year, are too far apart for accurate differentiation. In older children it may be necessary for a year or more to elapse before one gains a differential response in certain test-situations, but in repeated examinations on the same preschool child differential responses are obvious within the short period of a nursery-school year. Since the validity of a test cannot be shown by the usual methods, one might consider the possibility of psychological criteria established within the same test series to be checked by the repeat examination. In a relatively short time a sufficient number of examinations may be accumulated to show the validity of the test through its own predictive value. To obtain full value from a repeat examination, the psychological analytic approach must be stressed.

b. Analysis of Test Items. For analysis, test-situations must be expressed in greater detail than in gross plus or minus score. We have already at hand data which indicate characteristic responses in the same type of test at many age-levels, and which offer a working basis for serial gradation and suggestion for even finer interpolations. If the repetition of four digits is characteristic for four years, and five digits for seven, there may be no differential response in this situation at five and six years, but the majority of the well-known Binet tests lend themselves to the finer seriation.

Instead of arbitrarily giving credit for ability to count four pennies at four years and thirteen pennies at six, without further analysis, one might test for number concept according to the variations already suggested by Baldwin and Stecher, Cunningham, and Gesell. The child may count to ten orally, but count only five pennies, become indefinite when asked to place any number of objects above two in a box, and fail to add one and one presented in a problem. Another child placing his finger accurately on each penny says, "one, two, three," then stops, saying, "I don't know the name of this penny," but within the concept of three, adds and subtracts though the objects are not present. Which child has the more advanced intellectual grasp of number? Again, one child draws a square and attempts a triangle; another child of the same age draws a passable square, but his drawing of the triangle is similar to the square. In repeated examinations both children show improvement, the one relatively more than the other, but neither would show this improvement in a drawing test by the undifferentiated scoring of the Binet examination. Until the tests are arranged in finer seriated gradations, the effect of changing environment, such as entrance to nursery school, institution, or foster home will be masked by an undifferentiated score. The more analytic approach provides not only a record of what the child can do but also a definite indication of what he cannot do, as a basis for comparison and estimate of improvement or lack of improvement.

c. Emphasis on Response. Such analysis of the test-situation would place the emphasis, not on procedure or form of test material, but on the type of response. If the type of response is clearly defined, the psychologists may vary the material to suit the indi-

vidual child. We may use whatever material appeals to the child—blocks, pennies, or marbles; we are interested in a differential response to three, four, five, etc., objects, and also in whether or not he can deal with numbers when the objects are not present. This approach tends toward the elimination of errors arising from the unpredictable changes in the attitude of the infant toward the test-material. The type of response having been defined, the psychologist is free to use whatever material produces rapport and reaction and can repeat the test later under these different conditions.

d. The Problem of Uncontrolled Variables. Success and failure, however, on the single test series can have but little value by itself in estimating intellectual development so long as there are so many uncontrolled variables which affect the response. In constructing scales based on summation of credits, these variables must of course be taken into consideration. If a person is to have but six weeks' training in psychometric examinations, the test procedure must be accurately defined and learned by rote. No variation in presentation of material can be permitted, and definite and arbitrary rules for scoring must be made. In other words, one must trust as little as possible to the examiner's judgment. The result may then be more accurate than an opinion without tests and has at least the value of objectivity when we wish to know at a later date why the child who had a relatively low rating shows superior ability in school. If the final score is based on summation of credits, variations in rapport may lower the score in a way which is not psychologically valid. If one stresses 'comprehension' in language situations, one is likely to build up a certain amount of inhibition as one approaches the child's limit of understanding. These inhibitions may be removed by the performance type of test and than with rapport reëstablished, a few tests of higher type may be passed. In the meantime, through the variation in ability which may be obvious on analysis, the scoring presents a perplexing problem, by producing a conflict between objectivity and validity.

e. Summarizing Statement. Granted that intellectual development cannot be accurately defined, the persistence of the term in the literature implies that there is a phase of behavior which is more or less distinctly differentiated from motor, language (more particularly vocabulary), and emotional development. To define intellectual development and test its changing aspect in behavior,

we do not need more tests, but better tests, and this implies a better understanding of the psychological principles involved. The analytic approach to the test-situations places the emphasis on a full psychological description of the response and permits of variation in procedure to stimulate the type of response which is being investigated. Through these variations in response finer seriated gradation within the same test-situation may be arranged which will serve as psychological criteria of validity in the repeated examination on the same child. These suggestions for change in emphasis are directed toward the preservation of the more analytic approach to the problem of intellectual development. The scientific development of the valid test, with its essential elements more clearly understood, will naturally tend toward objectivity and reliability.

CHAPTER V

STUDIES OF EMOTIONAL AND SOCIAL DEVELOPMENT

I. Introductory

1. Historical Growth of Studies

When Wundt founded his psychological laboratory in Leipzig, he opened to experimental investigation all of the phenomena in which the psychologists were interested. As was to be expected, he first employed the methods borrowed from physiology with which he was most familiar. Furthermore, the aspects of the subject matter experimented upon were closely allied to the correlated biological interests of the times: reaction time, sensory discrimination, etc. The interpretations of results were largely introspective in implication—that is, the 'sensory' or 'motor' type of reactor, the subjective basis of color mixing, etc. The textbooks of the day indicated by the emphasis upon certain themes for study, such as sensation, perception, etc., the direction in which the psychologists were proceeding.

The experimental approach to the *feelings*, considered at this time to be elemental, was by means of physiological methods. The changes in respiratory and circulatory responses accompanying different feeling states were studied. The wonder is that the tridimensional theory of Wundt endured so long in the face of the utter confusion of the physiological findings. There is no doubt, however, that the studies upon feeling tone and its physiological accompaniments determined the type of later studies on emotion.

The emotions, as such, were of course discussed long before they were subjected to experimental investigation. They were usually one of the trinity suggested by succeeding generations of philosophers and psychologists: thinking, acting, feeling; perceptual, volitional, emotional; affect, conation, sensation. This first pre-experimental phase was fecund with theories. Because the 'method' was largely introspective, the data were obtained largely from *adult* experience or observation.

We will point out three trends which tended to focus interest on the field and which stimulated further experimental research. Darwin in his work upon the expression of emotion was interested in its biological significance and discussed the problem from the

point of view of survival value.[1] James and Lange were interested in the temporal relationship between the visceral response and the conscious aspect of the experience. How much of the interest since displayed in their work was due to the novelty of the suggestion of the upside-downness of the sequence of events, rather than to any serious contribution, is a matter of opinion. The third trend was the investigation of the physiological factors involved in the phenomenon in an attempt to find a method of classifying the emotions unambiguously. Sherrington and Cannon contributed their findings, which suggested that there was no peculiar or specific visceral reaction present in any particular emotional experience that was not common to all types of emotion. They showed also that the intensity of the emotion did not depend upon the extent of visceral change.

By this time the emotions as a topic began to loom large in importance in psychological publications. The trend was away from the analytical and structural schools towards the functional and applied. Authors still dealing with adult experiences were hard put to discuss the problem by any systematic scheme, because, on the one hand, there were too few scientific terms to express the wealth of these experiences, with the result that lay terms crept in, to the utter confusion of the subject; and because, on the other hand, any attempt at reducing the number by condensing the categories was apparently artificial. It can be seen that the first difficulty would lead to a multiplicity of terms and a confusion in meaning, whereas the second would lead to a multiplicity of theories and perhaps greater confusion.

The confusion led to a search for a *definition*. Prior to this it was assumed that everyone would be immediately aware of what was implied by the term "emotion." Is an emotion the "running away from the bear" or "the vaso-motor disturbance," or "the immediate awareness of danger," or "sudden changes in attentive adjustment"? As can be seen at this stage, students of the problem were still saying, "Oh, well, they (the readers) know what I mean when I say 'anger.' "

[1] This biological interest led, more or less directly, to psychological investigation in the comparative field, more recently represented by Warden on instinct drives, and Richter and Stone on nesting, etc.

2. Summary of Varied Points of View

Thus the state of opinion in the adult field at the time of the recent revival of interest in the child may be briefly summarized as follows:

Students of the subject who were interested in the problem from these points of view:	*Studied the problem by these methods:*
1. Classification into categories	1. Observation of behavior a. facial expression b. overt skeletal response c. comparative studies
2. James-Lange theory of sequence of events	2. Psycho-galvanic reflex Physiological changes Surgical extirpation of viscera
3. Teleological or motivating influence	3. Comparative studies a. theoretical drives b. the enunciation of drives c. introversion and extroversion
4. Diagnosis and therapeusis of abnormal conditions	4. Psycho-analytic technique Re-education clinics

Although prior to this time there had been some scattered references to emotional experiences in childhood, chiefly due to the biographical interests of Shinn, Preyer, the Sterns, etc., the method was merely that of classifying and recognizing.

3. The Work of Watson and Morgan

In 1917 Watson and Morgan published their study in which 'emotional' states were experimentally induced in children. This provided the first authentic data for the beginnings of a genetic study of the emotions.

Watson and Morgan enunciated the doctrine of a fundamental emotional background in infancy, present at birth, which develops and matures into the adult type of emotional experience. They classified their fundamental experiences into three types on the basis of stimuli inducing the emotion and the overt behavior called forth. To these types they gave the common names, fear, anger, love.

4. The Present Status

The literature upon the study of emotion in children for the past decade will be cited below with brief abstracts appended. It

is difficult to discover any particular trends which are manifest as a whole because of the fact that so few of the findings are accepted at large, on account of lack of repetition of studies and corroboration of results.

In the field of child study one can identify three major interests which have motivated the study of child life: formal psychology, parental education, and clinical psychology. Although these trends unite in scientific interest, the methods employed in each case are perhaps different.

Specific interest of the investigator:	*Type of problem studied:*	*Background of investigator:*
Formal psychology	1. Fundamental emotions in children	Psychology Biology
	2. The conditioning of emotions in children	Psychology Physiology
	3. The observation of emotions in children	Psychology Education
Parental education	1. Behavior problems involving emotions	Psychology Parental education Social studies
	2. Observation of children by their parents	Parenthood supplemented by training in objective methods supervised by psychologists
Clinical psychology	1. The training of the emotions	Psychology Psychiatry Physiology Parental education Public health
	2. The re-education of maladjusted emotional life	Psychology and psychiatry Psychoanalysis

Thus it will be seen that by concentrating upon the child in the school, the home, the laboratory, and the clinic—in other words, by studying him from the point of view of the physician, the student, the scientist, the social worker, and the parent—we should be able to pool the results and perhaps draw up a plan of human emotions that is at least less confusing than those with which we are at present familiar.

There is no reason why the methods employed in studying adult emotions should not be used in studying the emotions of children. There are, however, some obvious limitations. The most important is our inability to use introspective reports, which are exceedingly significant, in spite of the difficulties involved in their interpretation and evaluation. The second factor is the reluctance at present to duplicate certain laboratory experiments with children as subjects. Their unfamiliarity with these artificial situations, new faces, novel surroundings, would make the results in any case ambiguous. There is a further fact which seldom is mentioned. Before we can employ physiological or biological methods or results in the realm of childhood, these fields will have to be investigated by their own respective students. The psychologist must wait until these data are at hand.

For this reason one finds that the greatest efforts are being made in the field of mental hygiene and in the observation of children in controlled situations: namely, nursery schools and elementary schools. The more controlled type of experimental procedure, as employed by Watson, James, Sherman, and Marston, will become more prevalent as our data upon the emotions as everyday social phenomena increase in amount and variety.

It may possibly be that there are no emotions as such. We may be perpetuating a false doctrine. A new classification of psychological phenomena, a change of direction in the interests of research workers, may relegate the emotions to the field of historical development, as has occurred in the case of the 'will.' The studies which are enumerated below indicate the present interest in subject matter, type of methodology employed, and prejudices which dominated the drawing of conclusions.

Closely related to the study of emotions is the study of social reactions of young children. Studies in this field are still few in number, but interest in this phase of child study is assuming larger proportions. Besides summarizing the chief experimental contributions in the field of emotions of young children, this chapter will also summarize the experimental studies in social development—that phase of emotional behavior in which other children or adults act as the adequate stimuli or as contributing factors in the resulting behavior.

II. Abstracts of Studies of Emotion and Social Development

1. Bühler, Charlotte. "The Earliest Social Reactions of Children." ("Die Ersten Sozialen Verhaltungsweisen des Kindes.") *Soziologische und psychologische Studien über das erste Lebensjahr.* Jena: 1927, pp. 1-102.

Problem: To determine the earliest social reactions of infants to each other and to adults.

Method: The subjects were 146 children—75 boys, 71 girls—aged 4 months to 22 months, and various younger children individually observed. The children were placed face to face with each other, were confronted with toys, etc.

Findings: In the second half-year the child seeks contact with human beings and is disappointed if not noticed. Children of 4 months of age look at each other and sometimes smile. Theirs is a "sight contact." After 6 months, children come into "touch contact" and develop "despotism and rivalry." Younger children of superior activity sometimes tyrannize over older ones who are passive.

(A supplementary investigation by B. Tudor-Hart and H. Hetzler deals with the earliest reactions to the human voice and is based on experimental study of 126 children from 3 days to 5 months of age, in the Vienna clinics and Children's Home.)

2. Busemann, A. "Die Erregungsphasen der Jugend." *Zsch. f. Kinderforsch.*, 33: 1927, pp. 115-137.

Problem: To study the phases of physical and mental development in children.

Method: Survey of the literature in the fields of experimental study of language, intelligence testing, eidetic phenomena, emotional stress, etc.

Findings: There are critical phases in a child's life at ages 3, 6, 9, 12 or 13, 16 or 17, 19 or 20. The first emotional crisis occurs at age 3; the next at age 6, as indicated by increase in "naughtiness"; the next at age 9, which is the age of greatest number of behavior problems, especially in school. Next prepuberty shows its outstanding emotional characteristics.

3. Chambers, O. R. "A method of measuring the emotional maturity of children." *Pedagogical Seminary*, 32: 1925, 638-647.

Problem: To develop by use of X-O test, form B, a "differential unit" for use with boys, which would differentiate emotional maturity; to determine tentative norms.

Method: Evaluating and crossing out of words signifying social situations. Subjects were selected from fourth form to sophomores in college.

Findings: Rather inconclusive. Norms were thought to be established for the various educational standards. There was a differentiation which might be interpreted as a growth in emotional maturity. Certain cases showing "disciplinary problems" were indicated by wide deviation from the norm.

(Paper shows a marked change in response to this test with increasing change. Perhaps it has little application to infancy as a technique, but is significant in its relation to the general field of the genesis of the emotions throughout infancy, youth, and adolescence to the adult emotional level.)

4. Enders, Abbie C. "A study of the laughter of the preschool child in the Merrill-Palmer Nursery School." Papers of the Michigan Academy of Science, Arts, and Letters, 8: 1927, 341-356.

Problem: (1) What makes a child laugh? (2) Do these things, or kinds of things, that make a child laugh vary with age? (3) Does the personal or social element vary with age? (4) Is the amount of laughter the same for two-, three-, and four-year-old children?

Method: (1) Direct observation of the children in the nursery school; (2) individual presentation of material to a child removed from the group; (3) presentation of material to the group as a whole.

Findings: Sound and motion, or combination of the two, were the most effective elements in stimulating laughter. This statement applies to children of all ages—2, 3, or 4. The older children, however, began to laugh at word-play. Motion—for example, tumbling down of blocks—stimulated laughter most frequently in the two-year-olds. All of the children laughed most frequently when with other children, and seldom when alone or with adults. The three-year-olds laughed less frequently than the two-year-olds or the four-year-olds. The intelligence level did not seem to be a factor in determining the frequency.

5. Gates, G. S. "An experimental study of the growth of social perceptions." *Jour. Educ. Psych.*, 14: 1923, 449-460.

Problem: To study the genesis of the ability to interpret the emotional expressions of others.

Method: Six pictures composed the experimental materials, each the photograph of a young woman posed to represent one of six different emotions: (*a*) joy, mirth, amusement; (*b*) pain; (*c*) anger or defiance; (*d*) fear or horror; (*e*) scorn, contempt, or disdain; (*f*) surprise, wonder, or amazement.

In all, 458 children were tested, ranging in age from 3 to 14 years. There were 10 three-year-olds, 40 four-year-olds, and 85 five-year-olds.

A liberal interpretation was put upon the replies of the children. For example, replies such as: "She's laughing," "Happy," "Smiling," "Grinning," "Looking at something nice," "Thinking about her cute

little baby," were scored correct for the picture representing joy, mirth, amusement.

Findings: The results indicate age differences in the ability to interpret facial expressions of emotion. *Laughter* was understood by more than half of the three-year-olds, while *pain* was not correctly interpreted by half of any group below 6 years. *Anger* was not correctly interpreted by 50 percent of any age group below 7. *Fear* was correctly named by half of the ten-year-olds; *surprise* by half of the eleven-year-olds. Only 43 percent of the eleven-year-old children correctly interpreted *scorn,* though all the adults understood this picture. Sex differences were negligible.

(This experiment is an interesting pioneer in the field. Observers of young children will doubtless wish to see this function of interpretive ability tested with actual persons exhibiting emotions, rather than with pictures, and with a greater number of young subjects, before they will feel that definite conclusions can be drawn as to the time of the first appearance of this ability and as to its later development.)

6. Gesell, Arnold, and Lord, Elizabeth. "A psychological comparison of nursery-school children from homes of low and high economic status." *Ped. Sem.,* 34: 1927, 339-356.

Problem: To compare the traits of children from families of high and low economic status.

Method: Eleven pairs of children, aged 31 to 52 months, matched as to age, length of time in the nursery school, with one of each pair from a school attended by children from well-to-do families and the other from a school attended by children from poor homes, were the subjects.

The tests included block construction, form matching, drawing, comprehension, vocabulary, conversation, information, spontaneity of speech, spontaneity of drawing, play initiative, persistence, coöperativeness, poise, eating and sleeping habits, and self-care. In all, 330 clinical measurements were made on the foregoing fifteen different items, the procedure following that of the Yale Psycho-Clinical Schedules.[1]

Findings: The study points out the presence of great individual differences which can be measured early in the lives of very young children. The authors believe that it is important to recognize that differences in mental equipment probably exist from the beginning and are not all, even though they may be largely due to training and education. In general, the children from the favored economic group outdistanced the children coming from homes of inferior economic status. There were, however, great individual differences, and in some instances high scores were made by children from the poorer group.

One outstanding exception to this generalization occurs in the case of self-care. Children from the poorer homes did significantly better

[1] Gesell, Arnold. *Mental Growth of the Preschool Child.* New York: Macmillan Co., 1926.

in this test. The authors suggest that "it is possible that self-care depends much upon instruction, social suggestion, and motivation. Here the environmental stimulus may be greater in the B (poorer) home."

In many of the items studied, the social situation is important, and a considerable measure of social behavior is achieved in the investigation of several in the list. We select for especial notice conversation, spontaneity of speech, coöperativeness, and poise.

In all of these, the possibility of superior advantage having been offered in the homes of more culture, leisure, and stimulation amounts to probability. The children from the favored group gave evidence of the superior cultural advantages which their social contacts afforded.

Children from favored environments, accustomed to functions, callers whom they help entertain, and the like, probably have a training more conducive to poise and self-expression than do children from a poorer cultural group.

These possibilities, of course, will not blind the trained observer to the fact that the best cultural advantages fail to register on minds innately inferior.

7. Jones, M. C. "A study of the emotions of preschool children." *School and Society*, 31 : 1925, 755-758.

Problem: Investigation of fear trends and the methods of their elimination.

Method: The subjects were 70 children, from 3 months to 7 years of age, in an orphanage. They were a superior group as to intelligence. The children were given certain fear situations such as various animals, insects, faces, etc. The reconditioning was carried on by various methods: (1) elimination through disuse; (2) verbal appeal—to those children who could understand; (3) distraction—that is, offering the child a substitute activity; (4) direct conditioning—when fear object is gradually introduced until the fear disappears; and (5) social imitation—social suggestion through association with other children.

Findings: The number of fears of children apparently increase with the increase in age as the result of two factors: namely, greater insight into unusual conditions, and conditioning. Fears are best brought out by strange objects and by sudden presentation. Social imitation worked very well when the social group had prestige for the child.

8. Jones, Mary Cover. "The elimination of children's fears." *Jour. Exper. Psych.*, 7 : 1924, 328-390.

Problem: How may children's fears be reduced or eradicated?

Method: Seventy children, ranging in age from 3 months to 7 years of age, were selected. They were in an institution for temporary care. All children were subjected to situations usually arousing fear in normal children—for example, "being in a dark room," "sudden presentation of snake, white rat, etc." Those children who showed an un-

usually intense reaction were used for the next part of the experiment: namely, an evaluation of methods of reducing the effect of the situation upon the child.

Findings: These may be summarized in tabular form thus:

Method employed	*Number of cases cited*	*Comment*
1. Assure (2 weeks to 2 months)	3	"An unsafe method"
2. Verbal appeal	1	"Many hours of training may have little or no effect"
3. Negative adaptation	1	"Undoubtedly useful with infants and animals" "In older children is more likely to produce a summation effect than an adaptation"
4. Repression (by observation in group only, never employed experimentally)	1	"The emotion is resuggested and entrenched, rather than stamped out"
5. Distraction (substitution)	2	"Soothes a fear response by inducing child temporarily to forget the 'fear object.'"
6. Direct conditioning	1 (daily for 2 months)	"Requires delicate handling" "Distinctly useful"
7. Social imitation	2	"One of first methods to show signs of yielding results"

9. Marston, Leslie R. "The emotions of young children." *University of Iowa Studies in Child Welfare,* 3: 1925.

Problem: The experimenter investigated to what extent young children's reactions to their environment, particularly social, are conditioned by constant tendencies to introversion and extroversion. The study of the emotions was made upon the relationship between the introversion or extroversion to the generally accepted notions as to the emotions expressed in these two types of personalities.

Method: The emotions were studied indirectly by dividing the subjects, on the basis of the data, into two types: the introverted and extroverted. One hundred children were employed, ranging in age from 2 years to 6 years. The precise emotional expression was inferred from the introverted or extroverted characteristics of the personality.

Two experimental methods were employed: (1) ratings of judges as to the two types of personality characteristics; (2) reaction of the children to five experimental conditions.

The criteria of the emotional expression (characterized in introversion and extroversion) were: (*a*) social resistance; (*b*) compliance with the experimenter's requests; (*c*) interest shown to a novel situation; and (*d*) self-assertion.

Findings: (1) Rating scales were found to be reliable for measuring introversion and extroversion. (2) Sex differences were found; boys were significantly more introverted than girls. (3) No significant relationship was observed between chronological age, mental age, height, weight, and extroversion. There was, however, a decrease in introversion, as measured by the experiments, with the increase of age, especially in girls.

10. Preyer, W. *The Senses and the Will.* (Trans. from the German by H. W. Brown.) New York: Appleton, 1919.

Problem: The description of the expression of the emotions in the growing infant and child.

Method: An experimental procedure was not employed by this author. The technique was that of a careful daily examination of the infant and child as to emotional expressions. There was, however, an approach to the modern experimental technique in that situations were presented to the child and the resulting reactions observed. The observations as to the exact age of the infant or child, the stimulation conditions, and the resulting reactions were recorded immediately. The author observed one child systematically, but also reports his observations upon other children.

Findings: The emotions are divided into the pleasant and the unpleasant. The expression of the pleasant emotions is not definite at first and is manifested merely as a general activity. The unpleasant emotions, on the other hand, make their appearance very early and quite definitely. In spite of the intensity of the unpleasant emotions of fear, pain, and so on, it is difficult to distinguish one from another until the child is several months old. The cause of many reactions must be looked for before a definite decision can be made regarding the kind of emotion which the child shows. The emotions may be easily differentiated after the child begins to walk. The specific emotional reactions are inheritable qualities which may, however, be changed by the experience of the child. The time of the appearance of fear is, for example, dependent upon the treatment of the child. When fear stimuli are not presented, the time of the appearance of this reaction is greatly delayed. A similar condition holds for the other unpleasant emotions.

11. Sherman, Mandel. *The Differentiation of Emotional Responses in Infants.* I. "Judgments of emotional responses from motion-picture views and from actual observation." *Jour. Compar. Psych.*, 7: 1927, 265-283. II. "The ability of observers to judge the emotional characteristics of the crying

of infants and of the voice of an adult." *Jour. Compar. Psych.*, 7: 1927, 335-351.

Problem: The ability of various observers to name and differentiate the reactions of infants to stimuli which presumably elicit distinctive emotional responses; the ability of observers to judge the emotional characteristics of the cries of infants; the influence of the quantitative aspect of the stimulus upon the character of the cries of infants.

Method: Four types of stimuli were employed to elicit the responses of the infants: hunger, allowing the infant to go past the feeding period; dropping suddenly for a distance of about one foot and a half; restraint of the head and face; and sticking with a needle. The judgments of the various observers were obtained under the following conditions: (1) motion-picture views of the stimulus and the ensuing responses were shown; (2) only the responses of the infants were shown, the stimulating conditions being deleted in the film; (3) the stimuli and responses were transposed in the film so that the reaction was presented with a stimulus different from that which aroused it; (4) observers were allowed to listen to the cries of the infants first when the stimuli were not known, and also when they knew the stimulating conditions. The observers were graduate students in psychology, normal-school freshmen, medical students, and student nurses.

Findings: A considerable lack of agreement was apparent in the judgments of the emotions, not only when motion pictures were shown, but also upon actual observation in the nursery. For example, students in psychology named from twelve to twenty-five emotions when shown motion pictures. Medical students named different types of emotions than did the graduate students in psychology. The knowledge of psychology and of the previous work on the emotions of infants did not aid the graduate students in differentiating the various reactions. When the stimuli causing the reactions were shown, the degree of success was much greater than when the stimuli were not shown, indicating that the knowledge of the stimuli employed was the important factor in the observers' decisions. This was also shown in the judgments of the students who were shown the transposed films who named the stimulating conditions. No difference in success was found between the judgments based on the moving picture presentation and based on direct observation.

Similar results were obtained in the judgments of the cries. There was very little success when the stimuli were not known. When the stimuli were known to the observers, they named the emotions which were usually expected to result from such stimuli. For example, anger was named when the students knew that the infant was restrained, fear was named when it was known that the infant was dropped, and so on.

12. Washburn, Ruth W. "A study of the smiling and laughing of infants in the first fifty-two weeks of life." (Unpublished.)

Problem: Study of the smiling and laughing of infants with a view to determining (1) developmental variations in the two behavior patterns, and (2) personality differentiations in expressive behavior.

Method: Fifteen infants (seen individually and repeatedly at intervals of four weeks) were observed in their reactions to a standard set of stimuli. Subjects were studied from four to eight times each.

Findings: Smiling and laughing behavior varies consistently as growth proceeds, with more striking and consistent developmental differences in the smiling than in the laughing behavior patterns. Considering only these two forms of expressive behavior, without attempting to take into account underlying emotion or emotions, four distinct personality types emerged. Reactions true to one of the four types were found to have occurred consistently in each infant on the occasion of each successive examination.

13. Watson, John B. *Psychology from the Standpoint of the Behaviorist.* Philadelphia: Lippincott, 1919.

Problem: To find out whether there is a wider range of stimuli than those necessary to bring out fear, love, and rage, which may arouse an emotional reaction.

Method: Three babies from a hospital were put into various situations and the responses studied. The ages were 124, 126, and 165 hours. Examples of the situations which were presented to them were as follows: giving them animals such as a rabbit, pigeon, rat, etc. These animals were shown the children in a number of ways and they were allowed to play with them. Unusual situations were also presented, such as sudden stimulation by an animal, due to the uncovering of a box by the child.

Findings: It was invariably found that the children were not innately afraid of these animals, and that they reacted to the animals as to any other strange object by manipulation. Fears were conditioned quickly when they were stimulated at the same time by a situation which ordinarily calls out fear. It is concluded that the common fears of animals, of the dark, or other objects, are due to the conditioning of infants or children to these objects rather than to an inborn fear.

14. Watson, John B. *Psychology from the Standpoint of the Behaviorist.* Philadelphia: Lippincott, 1919.

Problem: To investigate the nature of the primary emotions and the stimuli necessary to bring them out.

Method: Several infants were employed and their responses described from direct observation and from the study of motion pictures. The infants were stimulated, when lying on their backs undressed, by various stimuli, and the responses described.

Findings: Three inborn emotions were found: fear, rage, and love. These responses were distinct and appeared apart from all training. *Fear* is manifested by a sudden catching of the breath, clutching ran-

domly with the hands, sudden closing of the eyelids, puckering of the lips, and then crying. The stimuli which call out this response are sudden removal of all support (or sudden push when the infant is just falling asleep) and loud sounds. *Rage* is manifested by a stiffening of the body with striking movements of the hands and arms, drawing up of the legs and feet, and holding of the breath until the child's face is flushed. The stimulus which brings out this response is the hampering of the infant's movements. Holding of the face or head results in a quick rage response. *Love* is manifested in various ways, such as the cessation of crying, attempts at gurgling and cooing, smiling, extension of the arms, and so on.

The various responses are manifest much better in older infants than in very young ones.

15. Watson, J. B. "Recent experiments in how we love and change our emotional equipment." *Ped. Sem.*, 32: 1925, 349-371.

Problem: To investigate the home factors leading to the emotional conditioning of children.

Method: Observation of children during the day's routine activity. The subjects were 9 children, ranging in age from 16 months to 3 years, resident at an institution for temporary care.

Findings: The situations which called out cries most frequently were:

1. Having to sit on the toilet chair
2. Having property taken away
3. Having the face washed
4. Being left alone in a room
5. Having the adult leave the room
6. Working at something without success
7. Failure to get adults or other children to play with them or look at them and talk to them
8. Being dressed
9. Failure to get adults to pick them up
10. Being undressed
11. Being bathed
12. Having the nose wiped

In addition to these there were manifestly occasions upon which organic factors were the cause of the crying: sleepiness, hunger, colic, etc. These occurred most frequently in the morning, between 9 and 11 o'clock.

The situations which called out laughing and crying most frequently were:

1. Being played with (playfully dressed, tickled, etc.)
2. Running, chasing, romping with other children
3. Playing with toys (a ball was particularly effective)

4. Teasing other children
5. Watching other children at play
6. Making attempts which resulted in adjustment (for example, getting parts of toys or apparatus to fit together or work)
7. Making sounds more or less musical, at the piano, with a mouth organ, singing, pounding, etc.

Jealous behavior was called out in the following situations:

1. When parents embraced each other. (Present in one case at 2 years; absent in another case at 11 months.)
2. When parents (playfully) attacked each other. (Present in one case at 37 months; absent in another case at 11 months.)
3. When younger child is born into family. (Not observed in only case cited—age 2-3.)

"Jealousy is a bit of behavior that is a (conditioned) love stimulus, the response to which is rage."

16. Watson, J. B. "Studies in the growth of the emotions." *Ped. Sem.*, 32: 1925, 328-348.

Powell Lecture at Clark University. Resumé of author's experiments and theories to date.

III. Studies in Progress

1. From the Iowa Child Welfare Research Station

a. Berne, Esther Van Cleave. "An experimental investigation of social behavior patterns in young children." Master's thesis, 1928. To be published as a University of Iowa Study in Child Welfare.

Problem: The description and measurement of the patterns of social behavior in several groups of preschool children.

Method: A graphic rating scale of thirty traits was devised as the result of an analysis of observations on the social behavior of about 50 children. Eighty-two children from 2 to 5 years of age were rated on the scale. Three raters made ratings for each child.

Preliminary Findings: True age-differences were found between two-year-old children and three-year-old children in thirteen traits, and between three-year-old children and four-year-old children in only one trait, coöperation. True sex-differences were found in the traits of maternality and irresponsibility for others. Whole and partial correlations revealed varying relations between chronological age and the social-behavior traits and between mental age and the social-behavior traits.

Method: Ten experiments were arranged for measuring the four social-behavior traits of obedience, interest in the group, coöperation, and respect for property rights of others in situations similar to those

of the preschool environment. Sixty children were given the experiments, and their reactions in six of the experiments were scored.

Preliminary Findings: Correlations ranging from .58 to .92 between the experimental scores and the ratings for the four traits showed that the ratings had a fairly high validity.

Method: Observational studies were made in diary form for seven children in order to determine how closely the ratings and experimental scores agreed with the social behavior of the children in their preschool environments. Later a form was prepared for recording quantitatively the social behavior of the children while they were being observed. The behavior of five additional children was recorded by means of this form.

Preliminary Findings: Good agreement was found between the observations and most of the social-behavior traits of the twelve children; and between the observations and the scores of the experiments.

b. Hungerford, Frances. "Behavior Problems of the Preschool Child." Master's thesis in progress.

A study of the incidence of behavior problems as they arise in the preschools. Descriptions are taken of situations in which these problems arise. The data (including over 1000 concrete situations) are to be classified and analyzed. The data have been collected and are being analyzed.

c. The Iowa Child Welfare Research Station has been securing for several years ratings on extroversion-introversion traits by the Marston scale for the entire group of preschool children enrolled in the preschool laboratories (about ninety children last year).

Ratings are made by at least three persons who are well acquainted with the children: teachers, graduate assistants, or staff members having daily contact with the children.

It is hoped that the repeated ratings on the same children from year to year will give information on the growth of these traits in preschool children and some light on the influence of experience in a preschool on the child's personality traits. The results are being used in studying the relationship of extroversion-introversion traits to other phases of the child's development.

2. From the Institute for Child Welfare, University of California

a. Taylor, Pearl S. "Parent-child relationship as a factor in nursery-school adjustment." (Unpublished master's thesis.)

Problem: To determine changes in the child's degree of dependence upon adults and in his manner and degree of participation in social play.

Method: Observations have been made on ten children, especially full notes being taken at the time the mother leaves the child in the

morning and when she takes him at the end of the day. The children are also observed in the home, and cases of "mother fixation" are carefully studied. Another check upon these reactions is made by means of a series of standardized situations, such as skill in dressing, with and without the mother's presence.

Additional subjects are to be included in this study next year.

b. Standard procedure has been derived for investigating (1) reactions to strangers, (2) compliance, (3) self-assertion, (4) aggressiveness. In the case of the first three, the procedure is adopted from Marston's study of the emotions of young children.

3. From the Institute of Child Welfare Research, Teachers College, Columbia University

a. A study directed by Dr. Dorothy S. Thomas is under way which attempts to measure and describe social reactions of nursery-school children by means of four different techniques.

(1) Measuring the child's abilities as directed toward things and toward persons. Detailed floor plans of several rooms of the nursery school, including the roof playground, are prepared, with the positions of all objects and persons carefully noted. Two observers (for purposes of checking) simultaneously note every movement of the child as he spontaneously moves about, and record is made of his stops and behavior in reference to objects and persons, in both special and temporal terms. Certain types seem to emerge: (*a*) The child who covers much ground and yet makes frequent though short stops at many persons and objects; (*b*) the child who covers ground but makes few contacts with either persons or things; (*c*) the social child who is continuously involved in grouping.

(2) Recording certain social situations. This part of the investigation takes three forms:

(*a*) An investigation to analyze and classify the situations which call forth laughter in children. The observer records in descriptive terms every situation in which each child laughs or smiles, describing the laughter situation and noting the other children involved. A 'laughter index' is computed. (*b*) Recording the social groupings occurring at some specific spot, and recording the part each child takes in this grouping, such as onlooker, parallel activity, coöperative, etc. (*c*) Sampling each child's language and analyzing this, somewhat after Piaget, as egocentric or socialized speech.

4. From Merrill-Palmer School, Detroit, Michigan

Four studies of social reactions are under way.

a. Case studies are being compiled from the staff records and reports, and personality studies of individual children are being

made by students. These studies include habits of work and play, mental traits, emotion reactions and words, social and moral traits and attitudes, given in descriptive form.

b. Preliminary work is being done on a test of social development. No report of this is as yet ready.

c. A rating scale devised for evaluating five major items of personality includes social behavior as one aspect.

Twenty items are scored plus or minus by three to five judges. Samples of these items are:

(1) Adjusts readily to other children.
(2) Friendly, takes initiative in making friends.
(3) More interested in things than in people.
(4) Thoughtful and considerate of others.
(5) Popular with other children.

The maximum score on this rating is twenty. Ten items indicate positive social adjustment when scored plus, while ten others indicate negative social adjustments when scored minus. Preliminary percentile norms worked out for 55 cases of children aged 2 to 5 indicate that the scale has value for showing progress in social adjustment during nursery attendance.

d. Descriptions of the behavior of children in the test situations are being compiled in an effort to evaluate capacity for personality adjustments.

5. From Normandie Nursery School, Los Angeles

a. An investigation directed by Elizabeth L. Woods is being made of children's reactions to isolation as a means of modifying undesirable behavior.

It is designed to secure complete descriptions of each case of isolation with a detailed history of behavior which preceded it, the manner of its application, its extent, and the behavior of the child subsequent to the experience. Each child is to be given a personality rating on the Merrill-Palmer scale with a view to noting typical personality differences in reaction to isolation as a means of correction, if such exist.

6. From the Yale Psycho-Clinic

A study is in preparation by Miss Viola Jones, formerly National Fellow in Child Development, dealing with the parent-child relation in cases of infant adoption.

a. The study is based on a detailed analysis of the career of 50 children adopted in early infancy. These case-studies furnish the data for a consideration of the emotional factors and personality interactions

which make for compatibility and incompatibility in the foster-parent, foster-child relationship.

7. From the University of Toronto

a. Keens, H., and Blatz, W. E. "A study of situations arousing emotional behavior in nursery-school children."

Problem: To analyze and classify the situations which disturb the individual child in the regular daily routine of the nursery school.

Method: Multiple records of situations as they arise. Time of day, child's name, stimulating situation, type of behavior called forth, manifesting the behavior treatment, if any. Checking upon findings by home reports.

Preliminary Findings: Tendency to greater frequency of episodes in three-year-old children. Great variety of responses which cannot be specifically classified in any category of the emotions. The difference in the behavior of the child at home and at school under emotional stress is striking.

CHAPTER VI

STUDIES OF PHYSICAL GROWTH

I. Introductory

a. Aims of the Chapter. With the increasing emphasis on the importance of the preschool years, the interest in the study of physical growth has made notable progress. To scrutinize the research in physical growth, as it relates to the preschool child, that has been done in the past few years, and to select and interpret briefly the significance of certain outstanding studies; to find out what research is in progress at the present time; to review the tests and methods by which physical growth is measured; and to suggest lines in which further study is especially needed, have been the aims in making this survey.

b. Scope of the Survey. The study of physical growth takes in many correlated sciences. Preventive medicine, heredity, eugenics, biochemistry, embryology, and many other sciences would be necessary parts of a complete picture of the field. For the purposes of this survey, however, only the anatomical, physiological, and nutritional aspects of physical growth are considered. In the presentation of material certain pathological topics have been omitted, although it is recognized that they influence growth very definitely.

In any study of physical growth the tests and methods of measurement call for a large share of attention. The technique of measuring parts of the body and of observing signs of growth and development is of such consequence in indicating and interpreting growth that work done in the development of methods and their application has been emphasized in this survey.

The material covered has been limited to pertinent studies, recently completed, which influence procedures followed today. Many reports of completed work are as yet unpublished because there is no scientific journal devoted specifically to the development of the preschool child.

c. Source of Material. In selecting the material covered by this survey, use has been made of journals such as *The American*

Journal of Diseases of Children, The Biochemical Journal, The Journal of the American Medical Association, The American Journal of Physiology, and others which deal with certain phases of growth. Much valuable help was derived from the selected *Child Development Abstracts,* a mimeographed service issued quarterly by the Committee on Child Development of the National Research Council. Information on research in progress was obtained from a *Directory of Research in Child Development* also issued by the National Research Council.

Additional information, both on completed work and on work in progress, was obtained from a questionnaire sent to 210 colleges and universities in the United States. The questionnaire was answered by 54 of the institutions, 47 of which reported that no research in child development had been done or was under way. Seven reported completed work; four of these reported further work in progress, and three suggested fields for further study. Of the thirty-five completed research projects reported, eleven dealt with school children.

d. Classification of Abstracts. The abstracts which follow were chosen to indicate the different lines along which research has been done. No one subject has been treated thoroughly because space is limited. The studies surveyed include research done directly with preschool children under experimental conditions, experimental research done with animals which has a possible application to the physical growth of children, and studies of clinical data.

II. Abstracts of Reports of Recently Completed Research

1. Anatomy and Physiology

1. Brody, S. "Time relations of growth. III. Growth constants during the self-accelerating phase of growth." *Jour. Gen. Physiol.,* 10: 637.

Problem: To present quantitative analyses of growth curves of the self-accelerating phase of growth.

Method: Plotting of growth curves of chick embryos, white rats, wheat grain, maize plant, B. Coli, and human population of American Colonies and the United States.

Findings: Growth curves consist in all cases of two major segments. The first major segment, in higher animals and plants, is made up of several (probably five) shorter segments, during each of which

growth takes place at a constant percentage rate, with abrupt transitions between the successive stages. (A previous paper indicated that the time rate of growth following the major inflection declines at a constant percentage rate.) The junction of the two segments is at puberty in animals and at flowering in plants.

The two major segments are not symmetrical about the major inflection. The slope following the inflection is always less than the slope preceding the inflection, and the inflection does not come in the center of the growth curve.

The instantaneous rate of growth at the beginning is 100-200 percent per day, but at two months after conception the rate of growth in man is only 8 percent per day. The author points out reasons why his initial growth rate is much less than that estimated by other investigators.

2. Crozier, W. J. "Growth curves in relation to temperature." *Jour. Gen. Physiol.*, 10: 53.

Problem: To discover the relation of temperature to growth curves.

Method: A study of the growth curves of the height of sunflowers, unmated male white rats, Drosophila, five species of Rhizopus, the speed of cleavage of the fertilized ova of *Arabacia* (frog), teleosts, and others, from the data of various investigators.

Findings (*Author's summary*): The velocity of growth, taken as the reciprocal of the time required to attain a given size or stage of development, obeys with some exactness the Arrhenius equation for relation to temperature. The values of u and the type of 'breaks' found in the curves connecting velocity and temperature are similar to those found in the case of various other vital activities. More precise data, particularly from experiments in which parts of the given developmental stadium are passed at different temperatures, may strengthen present indications that this relationship is not absolute. It is pointed out that the equation for an autocatalytic process, taken as descriptive for growth, predicts particular sorts of deviations under these conditions, which have in one instance been obtained experimentally, and may at the same time, nevertheless, permit the apparent temperature characteristic for average growth velocity to agree rather closely with that for one of the two velocity constants present in the correct autocatalytic equation.

3. Pearce, L., and Van Allen, C. M. "Effects of light on normal rabbits, with especial reference to the organic reaction. I. Clinical and post-mortem observations. II. Organ weights. III. Analysis of organ weights." *Jour. Exper. Med.*, 44: 1926, 483-502.

Problem: To determine the effect of light, with none of the shorter ultra-violet rays, on the general body health and on the weight of organs in normal rabbits.

Method: Two groups of normal male rabbits, one kept under conditions of constant light, the other kept in constant darkness for from 2 to 12 weeks, were observed clinically and subjected to post-mortem examination. A group kept in an ordinary animal room for the same period and two groups of rabbits recently brought into the laboratory served as controls.

Findings: The general health of the rabbits was not impaired by artificial light or by the exclusion of light. The total gain in weight in the group kept in darkness was below the normal, while it was above the normal in the group kept under constant light. Post-mortem examinations revealed visible lesions of some kind in about the same percent of rabbits in each group. Most of these were slight, and none appeared to have any deleterious effect on the health of the animals. The relative weights of the organs of animals kept under constant illumination were less than those of the control group. The rabbits kept in darkness also showed a tendency to decreased and stabilized weights, but it was less pronounced than in those kept under constant illumination. A notable exception was the weight of the liver, which was markedly increased.

The results support the conception that a definite relationship, expressed by the trend or direction of organ weight, exists between light and the physical state of the animal organism.

4. Blau, A. F. "The treatment of enuresis." *Med. Jour. and Record,* 124: 492.

Problem: To discover the cause of enuresis and an effective treatment for it.

Method: Observation of a series of 90 cases at the Lenox Hill Hospital Clinic. Sixty-six of the cases were in children under 10 years of age. Hygienic and dietetic treatment was the same with all. Most of the cases were treated for months with the usual drugs, including strychnine, ergot, and belladonna, thought to be beneficial. Following this, 15 cases were put on atropine and 75 were treated with pituitary extract and pituitrin.

Findings: The drugs had no material effect on the condition, and only a few responded to these medications. However, of the 75 cases treated with pituitary extract and pituitrin injections (over 50 percent of which were of over two years' duration before treatment began), 35 percent, receiving pituitary extract only, showed either improvement or cure; of the 54 cases receiving both pituitary extract and the injections, 37—or almost 75 percent—were either improved or cured, 10 were not seen after treatment, and only 7 remained unimproved.

The author concludes: (1) Vesicular atony (underlying cause uncertain) is responsible for enuresis. (2) The majority of cases are in the category called essential enuresis, in which probably a neurosis is primarily responsible for the bladder trouble. (3) The use of pituitrin has proved more favorable than any other therapeutic measure. (4)

Further clinical experimentation with pituitrin in the treatment of enuresis is desirable.

5. Goldberger, I. H., and Mellion, J. "Is the development of the carpal centers delayed in rickets?" *Am. Jour. Dis. Ch.*, 31: 58.

Method: A study of the records of 62 infants, 40 with rickets and 22 non-rachitic, to observe the earliest appearance of the carpal centers. Routine monthly roentgenographs of the wrists were used. The infants varied in age, at the first examination, from 2 to 38 weeks, and none were included who had carpal centers at the first examination.

Findings: The appearance of carpal centers in rachitic infants was later than in normal infants. This also was true for second or subsequent carpal centers. Although delayed, new calcification centers appeared in 33 infants during the active stages of rickets. Antirachitic treatment (cod-liver oil, ultra-violet rays, or yolk of egg) rarely brought about a development of carpal centers within a period of two months.

6. Calkins, L. A., and Scammon, R. E. "The growth of the spinal axis of the human body in prenatal life." *Proc. Soc. Exper. Biol. and Med.*, 24: 300.

Problem: To determine the rate of the growth in length of the spinal axis as related to the rate of the growth in total body length of the human fetus.

Method: Measurements of the total length of the spine and its parts in 148 human fetuses, ranging from 2.5 to 55.0 cm. in total length.

Findings: The formulæ computed from the measurements indicate that the law of developmental direction holds good for the spine as a whole and the various spinal segments with the exception of the sacrum and the coccyx, which show a relatively rapid rate of growth in early prenatal life and a relatively slow rate thereafter. This exception is in line with our knowledge of the phylogenetic reduction of the sacro-caudal vertebra in the higher primates.

7. Garot, L., and Schwers, Mlle. "A study of blood pressure in children." *Rev. franç. de pediat.* 2: 1926, 36.

Problem: To determine whether other factors than the actual pressure may be responsible for the conception that pressure is relatively low in the infant and increases with increasing age.

Method: Studies were made on children ranging in age from 11 months to 13 years. Various types of blood-pressure apparatus were used with varying methods of application.

Findings: The results, expressed graphically, show marked differences according to the type of apparatus and the method of application. The authors consider the oscillometer of Pachon the most accurate, and advise applying it to the lower third of the leg in children under 6 years and to the arm of older persons. The figures thus obtained are not much

below those found in the normal healthy adult. From these observations it would seem that the opinion that the actual blood pressure increases with increasing age is no longer tenable.

8. Ikeda, K. "Physiologic blood pressure in infants." *J. Pediat.* (Tokyo), 1925, 197.

Problem: To determine whether the blood pressure of infants bears any relation to body weight.

Method: Observation of blood pressure in 589 Japanese infants who showed no apparent pathologic change.

Findings: There seems to be a direct relation of body weight to blood pressure. The average blood pressure of infants at 24 hours after birth (60.6 mm. of mercury) increases slightly to the fifth day (64.8 mm.), but drops noticeably (58.8 mm.) on the sixth day, when the initial weight loss reaches its maximum. From this time, pressure increase is steady and rapid during the first four weeks, then steady from the second month on, though not so great as during the first month. At the end of the first year, male infants had an average blood pressure of 84.6 mm. and females of 82.5 mm.

9. DeBacker and Van De Putte. "Radiological study of the digestive tract in normal infants." *Brit. Jour. Radiology,* 31 : 493.

Problem: To study the digestive tract of normal infants.

Method: Gelobarine was given to 15 normal infants less than 7 months old—in mother's milk to 8, and in cow's milk to 7.

Findings: Two types of stomach were found: one hypertonic, emptying quickly, triangular in shape, and with a small air content; the other orthotonic, slower in action, much larger, forming a bag placed with long axis transverse, and with a large air pouch. The duodenum extends from the twelfth thoracic to the second lumbar vertebra. The caecum lies above the iliac fossa, the rest of the colon as in the adult. The stomach empties in from 2 to 4½ hours. Barium reaches the caecum in from 2½ to 4 hours, the lineal angle in from 5 to 7 hours, the rectum in 8 hours, and is evacuated in from 8 to 12 hours.

10. Zamkin, H. O. "The size of the liver and the spleen in apparently normal children." *Arch. Pediat.,* 43 : 169.

Method: Examination, by palpation, of 2100 apparently normal children—531 in the first year, 458 in the second to fourth years, 835 in the fifth to ninth years, and 276 in the tenth to twelfth years. An attempt was made to compare the sizes of these organs according to race, nationality, and type of feeding in infancy. An examination of 172 children with rickets was made to compare the size in differing states of nutrition.

Findings: The liver varies in size from just palpable to palpable 6.5 cm. below the costal margin in the mid-clavicular line. It is commonly found 3.5 cm., 4.5 cm., and 5.5 cm., below the costal margin in this line at as late as 9 years of age. Neither the state of nutrition

(slightly over or underweight) nor the type of diet in infancy affected the height of the liver.

The spleen was palpated below the free border of the ribs in 25 percent of the 2100 children. The frequency with which the spleen could be palpated was 41 percent in the first year, 25 percent in the 2 to 4 years group, 18 percent in the 5 to 9 years group, and 10.6 percent in the 10 to 12 years group. Only those cases of rickets having a marked Harrison's groove or secondary anemia showed an enlarged spleen to any extent (69 percent in first year, 72 percent in second year); thus rickets *per se* cannot be characterized by a large spleen. The type of feeding in infancy, race, or nationality had no appreciable effect on the spleen. A large spleen was as a rule associated with a large liver.

11. Hammett, F. S. "Studies of the thyroid apparatus. XXIX. The rôle of the thyroid apparatus in growth." *Amer. Jour. Physiol.*, 76: 69.

Problem: To determine the effect of the thyroid and parathyroid glands on growth in weight.

Method: Observations of normal, thyro-parathyroidectomized, and parathyroidectomized rats.

Findings: This study brings together the results of a number of the author's published studies of the thyroid apparatus and its effect upon different organs and systems. The thyroid participates in regulating the metabolic level, through which is determined the rate of the maintenance processes of the organism and the amount of material presented to the cells for growth processes during a given period. It is therefore a determinant of the capacity factor in growth.

Catalysts other than those produced by the thyroid are concerned in determining the intensity of growth.

The parathyroids are not concerned in growth except as they protect the organism from the growth-retarding influences of toxic products resulting from parathyroid deficiency. This retardation is largely attributable to a lowering of the nutrient level following a disturbance in effectiveness of the digestive system owing to the response of the sympathetic system to the toxemia.

Puberty influences the growth response to the glandular deficiencies, originating in gonadal incretory development and being expressed in an increased call for growth materials.

The experiments demonstrate the stability of the intensity factor of growth under adverse conditions and the remarkable power of the organism to adjust itself in this respect.

12. Scammon, R. E. "The prenatal growth and natal involution of the human suprarenal gland." *Proc. Soc. Exper. Biol. and Med.*, 23: 809.

Problem: To determine the rate of prenatal growth and natal involution of the human suprarenal gland as compared with the total body growth.

Method: Observations on the weights of 1087 pairs of suprarenal glands from 425 fetuses, 338 infants stillborn or dying within two days of birth, and 324 infants over 2 days and under 1 year of age.

Findings: The prenatal growth of the suprarenal glands is proportional to the growth in body weight. However, the postnatal involution of the suprarenals indicates a decrease in weight to approximately one-third of the natal weight in the first two weeks and to approximately one-half of the natal weight in the first three months after birth.

13. Castaldi, L. "Experimental research on the influence of adrenal cortex on body growth." *Rev. sud-americana endocrinol. immunol. quimioterap.*, 9: 1926, 861-79. Abstracted in *Chem. Absts.*, 21: 953.

Method: Biometric, clinical, and laboratory experiments.

Findings: The adrenal cortex, and not the medulla, promotes body growth by a morphogenic hormone produced in its cells. Since the effect is less than that of the thyroid and of the hypophysis—possibly even less than that of the thymus—the admixture of large proportions of adrenaline in pluriglandular preparations employed in growth deficiencies is not justified. Cortex alone should be used, in view of the antagonistic and harmful effect of adrenaline in continued use.

14. Covell, W. P. "Growth of the human prenatal hypophysis and the hypophyseal fossa." *Am. Jour. Anat.*, 38: 379.

Method: Examination of 98 specimens of the hypophysis of prenatal life and of 50 of the hypophyseal fossa, from 82 fetuses ranging in crown-heel length from 15 to 55 cm. and 16 fetuses ranging in crown-rump length from 1.1 to 15 cm.

Findings: The growth in weight of the hypophysis during the embryonic and early fetal periods is very rapid. It follows the course of a shallow concave curve which rises rapidly in specimens of 50 to 100 mm. crown-rump length. This growth resembles the type of growth characteristic of the whole body. At birth the total weight of the hypophysis is about 107 mg.

15. Scammon, R. E. "The prenatal growth of the human thymus." *Proc. Soc. Exper. Biol. and Med.*, 24: 906.

Problem: To determine the growth rate of the thymus in weight as compared with body weight and body length.

Method: Weighings of the thymus from 1043 human fetuses of less than 4000 gm. total body weight.

Findings: The weight of the thymus in the fetal period varies greatly. The correlation between thymus weight and body weight is

closer than that between thymus weight and body length. The formulæ for expressing these relations indicate an increase in the relative weight of the thymus during the fetal period.

16. Dunn, H. I. "Variability in the growth of the fetal central nervous system as measured by biometric constants." *Jour. Comp. Neurol.*, 42:165.

Method: Linear and volumetric observations on the central nervous system of 156 human fetuses (54 males, 56 females, and 46 of unknown sex) ranging in crown-heel length from 3.1 to 53.6 cm.

Findings: The standard deviations of all the volumetric measurements increase in a manner more or less parallel with the growth of the mean.

The standard deviations of all linear dimensions remain practically constant throughout the fetal period.

17. Howard-Miller, E. "A transitory zone in the adrenal cortex which shows age and sex relationships." *Am. Jour. Anat.*, 40:251.

Problem: To determine the relation of the changes in the condition of the transitory zone to the presence and functional activity of the gonads in mice.

Method: Examination of the adrenal cortex of normal mice at various stages in their development.

Findings: An inner zone of distinct individuality was found in the adrenal cortex of a mouse at 3 weeks of age. A sexual difference due to degeneration of this zone in the male at 5 weeks of age was found. This sexual difference is not characteristic of the female throughout the entire reproductive period.

2. Anthropometry

1. Davenport, C. B. "Human growth curve." *Jour. Gen. Physiol.*, 10:205.

Problem: To analyze the human growth curve, using the best available data.

Method: The curve of the velocity of development of weight from conception to maturity and the annual increments in weight were based on data for Nordic males, the prenatal portion from Streeter (1920), postnatal to 6 years from Woodbury (1921), later years from Davenport.

Findings: The human growth curve shows two (and only two) outstanding periods of accelerated growth—the circumnatal and the adolescent. The curve shows no third marked period of acceleration at between the third and sixth years, as suggested by earlier investigators.

The circumnatal growth cycle attains great velocity, which reaches a maximum at the time of birth. It has a theoretical range of 44

months, a standard deviation of 5.17 months, and a modal velocity of 10.2 kilos per year.

The adolescent growth cycle has less maximal velocity and greater range in time than the circumnatal cycle. The best-fitting theoretical curve is a normal frequency curve ranging over about 10 years, with a standard deviation of about 21 months and a modal velocity of 4.5 kilos per year.

The two great growth accelerations are superimposed on a residual curve of growth which measures a substratum of growth out of which the accelerations rise. This probably extends from conception to 55 years, averaging the low velocity of about 2 kilos per year from 2 to 12 years. It is interpreted as due to many growth operations coincident or closely blending in time.

2. Hanson, F. B., and Heys, F. "Growth curves of albino rats, born during the four seasons of the year, under uniform laboratory conditions." *Anat. Rec.*, 35 (2) Apr. 25, 1927.

Method: Groups of rats born in the four different seasons were studied up to the age of 100 days, and their growth curves were plotted.

Findings: Birth weights were found to be remarkably constant throughout the year, and no significant difference between the seasonal groups was noted up to 20 days of age. From 40 to 100 days of age the four seasonal groups grew at four significantly different rates.

Body weight from birth up to 20 days seemed to have a real influence on the body weight of the adult rats. Those heaviest at 20 days were also heaviest at 100 days, and the smallest at 20 days were the smallest at 100 days.

3. Porter, W. T., and Baird, P. C. Jr. "Weight and month of birth." *Am. Jour. Physiol.*, 81 : 1.

Problem: To determine the influence of birth month on weight.

Method: Median weights of Boston school children of different ages were found and studied statistically.

Findings: The median for children born at any time of the year was practically the same at the end of the same number of twelve-month periods. January to June seemed to be a period of slow growth, while July to December seemed a period of rapid growth.

4. Frontali, G. "Direct measurements of the body surface of children." *Riv. di clin. pediat.* 25 : 1927, 241. Abstracted in *Am. Jour. Dis. Ch.*, 34 : 912.

Problem: To check the accuracy of certain methods of determining body surface area.

Method: The author determined the body surface of 33 children, ranging from 24 days to 12 years of age, by various formulæ, and by direct measurements.

Findings: The formula of Vierordt-Meeh gave results 9 to 29 per-cent higher than those obtained by the direct method. Only 2 of the

33 calculations by Lissauer's formula varied by 10 percent from the direct measurement, 18 being higher and 15 lower than figures obtained by the direct method. Calculations by DuBois' method were less than by direct measurement in 26 of the 33 cases, and in 11 of the 33 the difference was more than 10 percent.

5. Cowgill, G. R., and Drabkin, D. L. "Determination of a formula for the surface area of the dog, together with a consideration of formulæ available for other species." *Am. Jour. Physiol.*, 81: 36.

Problem: To construct a formula for determining the surface area of dogs.

Method: The body surface areas of seven dogs ranging from 3.39 to 32.64 kg. in body weight and differing in nutritive states were measured by the paper-mould photographic method. Several formulæ for estimating surface area were constructed on the basis of the data obtained. A formula new in its theoretical basis and consisting essentially of a Mech-Rubner-Dreyer expression multiplied by a correction for the nutritive state of the subject, whether thin or obese, was derived. The principle of the new type formula was tested satisfactorily on data for cattle, swine, and horses, and unsatisfactorily on data for babies, rats, and chickens.

Findings: A new formula for human beings proved almost as accurate as the DuBois height-weight formula. The formula makes possible a new comparison of basal metabolism of the dog and man.

6. Boyd, E., and Scammon, R. E. "A new method of estimating the surface area of the living subject applied to children." *Anat. Record*, 35: 1927, 5.

Method: Nine casts of living children from 3 to 5 years of age were made by the following method: Complete plaster of Paris casts were made of the children. These were covered with non-elastic zinc oxide adhesive plaster and then removed. Their areas were traced on celluloid sheets, and areas of the celluloid outlines were determined by weighing on an analytic balance.

Findings: Determinations from the casts were slightly higher than those calculated according to DuBois' formulæ. The variability of repeated determinations of the surface area from the casts was 1 to 2 percent. The experimental error was no greater. These determinations were less variable than the values obtained by the various permutations of the DuBois formulæ.[1]

[1] Other studies of Scammon are reported in the abstracts under "Anatomy and Physiology." He has reported a number of studies on the prenatal growth of various organs and parts of the body as well as the following recently published studies: "The First Seriatim Study of Human Growth"; "Observations on the Parietal Fontanelle in the Newborn and in Young Children" (with F. L. Adair); and "Studies on the Growth and Structure of the Infant Thorax."

3. Nutrition

1. Richet, C., Jr. "Food consumption of children aged 5 to 15 years." *Compt. rend. Soc. Biol.*, 96: 1927, 84-86.

Method: A study was made of 12 children aged 4.5 to 14.5 years.

Findings: The protein consumption averaged 2.47 grams per kilogram of body weight; the calories were 85 per kilogram. These figures are about double those for adults.

2. Cowgill, G. R. "A relation between appetite and the energy factor in nutrition. A practical consideration." *Jour. Biol. Chem.*, 67.

Method: Observations of dogs on various complete diets.

Findings: When a complete diet is fed, a dog eats all the food offered and gains in weight until a certain maximum is reached; thereafter the dog eats such amounts of food daily as are necessary to maintain the body weight between rather narrow limits. When various diets differing markedly in energy content are fed, the daily food intake varies considerably, but the caloric intake over any period of a week or more is practically constant.

3. Ladd, M., Evarts, H. W., and Franks, L. W. "The relative efficiency of certified and pasteurized milk in infant feeding." *Arch. Pediat.*, 43: 380.

Problem: To determine the relative efficiency of certified and pasteurized milk in weight development, the prevention or cure of rachitis, and the dentition of infants.

Method: Observation of groups of infants in foster homes, under medical and nursing supervision.

Findings: Infants observed for approximately seven months showed the following percentage gains in weight development: 61 infants on grade A pasteurized milk, 1.7 percent; 59 infants on grade 3 pasteurized milk plus orange juice, 7.9 percent; 72 infants on grade 3 pasteurized milk plus cod-liver oil and orange juice, 9.5 percent; 17 infants on certified raw milk, 14.0 percent; 5 infants on certified raw milk plus cod-liver oil and orange juice, 7.2 percent. In the last group, two of the infants were in very uncoöperative homes, with relatively poor results in general development. The other three showed the 14 percent gain in weight development noted for certified raw milk without cod-liver oil or orange juice.

The certified raw milk was as effective in preventing and healing mild rickets as the pasteurized milk plus orange juice and cod-liver oil. None of these children had clinical symptoms of rickets. Dentition on both types of feeding was approximately normal.

The more exact and scientific feeding of the cows giving the milk certified may have had more to do with its greater efficiency than the

difference between the raw and the pasteurized states. Because of this the authors advise orange juice and cold-liver oil as a matter of routine in baby feeding, but advise encouraging the use of certified milk.

4. Morgan, O. F., Hatfield, G. D., Tanner, M. A. "A comparison of the effects of supplementary feeding of fruits and milk on the growth of children." *Am. Jour. Dis. Ch.*, 32: 839.

Problem: To determine the comparative effects of oranges, figs, and milk, as supplementary feedings, on the growth of children.

Method: Forty-seven children in a school for the deaf and blind, without other organic defects, received the same institutional diet, which was adequate in calories, excellent in milk and animal protein content, fair in vegetables, but somewhat deficient in fruits. The children were divided into four groups, one to be a control and the others to receive daily supplementary feedings, respectively, of milk, orange, and figs, over a period of 14 weeks.

Findings: An average of all gains indicated that the orange group rated highest. Next in order came the fig and milk groups; the control group ranked lowest. The standing and sitting heights increased most in the milk group. Chest circumference and expansion and vital capacity (water spirometer) increased most in the fig group. Hand-grip strength increased most in the orange group, as did the average gain in weight for height and age.

5. Chase, C. E. "The influence of nicotine and caffeine on the growth of chickens." *Am. Jour. Physiol.*, 81: 469.

Method: Large doses of nicotine were introduced daily into the crops of growing chicks. Caffeine was administered, and a control group received equal amounts of water in the same way. Weight records were used to plot the growth curves.

Findings: Nicotine in large doses at first stimulated growth and later retarded it. Caffeine retarded growth throughout the experiment.

6. Friedberger, E. "Value and nutritional disturbances of a pure diet of hen eggs." *Deut. Med. Wochenschr.*, 52: 760.

Method: Different groups of rats were fed diets of raw whole egg, yolk alone, white alone, and cooked whole eggs.

Findings: Rats were maintained on the egg diet. Raw whole egg or the yolk alone had a marked nutritional value. The white alone could not maintain life for more than two months. Cooked eggs caused the hair to fall out and a loss of weight.

7. Winters, J. C., Smith, A. H., and Mendel, L. B. "The effects of dietary deficiencies on the growth of certain body systems and organs." *Am. J. Physiol.*, 80: 576.

Method: One hundred male rats were divided into four groups. Each group was fed for 40 days on a diet characterized by low calorie,

inadequate protein, gliadin diet, or inadequate salt. The rats were then dissected, and observations of their physical growth, as compared to that of normal rats of the same weight, were made.

Findings: All groups had persistent skeletal growth. Body length increased most on the gliadin diet and least on the low salt diet. Leg bones weighed 50 percent, or above, more than those of normal animals of the same weight except in the group on the low salt diet, in which bone weight decreased 30 to 40 percent. Slight increases in brain weight were noted in all groups. The most marked influence upon organs was that of the low salt diet on the increase of kidney weight. In no case was there an increase in any part of the body equal to the growth of normal rats in an equal period of time.

8. Mitchell, H. H., and Carman, G. C. "The composition of the gains in weight and the utilization of food energy in growing rats." *Am. Jour. Physiol.*, 76: 398.

Problem: To determine the differences in composition of gains in weight and the utilization of food energy in growing rats on experimental diets.

Method: Rats from different litters kept on an experimental diet were killed and analyzed. Check rats from each litter were killed at the beginning of the experiment and the average composition of the checks in each litter was used to check other rats of the same litter at the end of the experimental feeding.

Findings: The composition of gains in weight made by the rats varied considerably, even when the ration consumed, initial weight, length of growth period, and rate of growth were the same. Thus, in two rats with such similarities, one had a dry matter content of 46.1 percent while the other's was 35.8 percent; the fat content was 22.5 in the first rat and 10.5 in the second; the energy value per gram of gain was 3.04 calories in the first rat and 1.65 calories in the second. Similar discrepancies were found in each litter. The authors conclude that gain in weight is not a definite measure of the nutritive effect of a ration fed, but is subject to variation caused by the operation of unknown factors.

In growing rats from 60 to 80 percent of the metabolizable energy consumed in food may be accounted for by the basal heat production of the rat and the energy content of the gains in weight produced. Thus gains in weight alone account for only a small proportion of the intake of metabolizable energy—namely, 6 to 14 percent.

9. Daniels, A. L., Pyle, S. I., and Brooks, L. "Effect of irradiated winter milk and cod-liver oil on growth of young milk fed rats." *Proc. Soc. Expt. Biol. and Med.*, 23: 821.

Method: Young rats were unintentionally stunted in growth, though without definite signs of rickets, when their mothers were fed on a diet

of winter milk. The same stunting and poor condition were noted when the mothers received iron and iodine as well. To determine the cause of the poor growth, the diets of the mothers were supplemented respectively with calcium phosphate, vitamin B preparation, yeast, and cod-liver oil. When these did not give satisfactory results, the milk fed to the mothers was irradiated.

Findings: None of the additions to the diets produced satisfactory growth. Three of the groups receiving the cod-liver oil gained slightly, but one of the cod-liver oil groups and the group receiving calcium phosphate died. With the irradiation of the milk, however, growth was resumed, appetites increased, fur became thick and silky, and in a short time the animals appeared normal. Microscopic examination of the animals that died revealed no characteristic symptoms of rickets, but exact evidence is lacking, since histologic examinations were not made. The rapid growth on the irradiated milk seemed too great to be accounted for only by an increase in the antirachitic potency of the milk.

10. Barenberg, H., Freeman, I., and Green, D. "The effect of ultra-violet radiation on the health of a group of infants." *Jour. Am. Med. Assoc.*, 87 : 1114.

Problem: To determine the effect of ultra-violet radiation from a mercury vapor lamp in the prevention of respiratory infections and on the nutritional state of a group of infants.

Method: Two groups of children in two hospital wards, totaling 40 children, were used. The first group was largely under 1 year of age, the second from 1 to 2.5 years. In each ward, roughly half of the children were subjected to irradiation in addition to the usual sunlight, while the rest received the same care, but without the irradiation. Diets were adequate, and all received orange juice and cod-liver oil daily. The irradiated group were given light treatments on alternate days, gradually increasing over a period of three months. The treatments were of from 3 to 15 minutes' duration and from 36 to 30 inches distance, totaling 11 hours at a distance of 3 feet and 5 hours at 30 inches. The children were observed for two months longer.

Findings: There was an initial increase in weight in the irradiated group during the first month which did not continue during the subsequent months. Infections during the winter were not lessened in the irradiated group. Ultra-violet rays did not protect against or mitigate pertussis. Hemoglobin was not increased by irradiation, but its percentage rose in the spring in both groups with the decrease in infections. Irradiation improved the skin texture and muscle tone.

11. Falkenheim, C., Voitz, W., and Kirsch, W. "Irradiation of cows and the antirachitic properties of their milk." *Klin. Wochenschr*, 5 : 1926, 2071-2.

Method: Milk from a cow before and after irradiation was fed to rats.

Findings: The antirachitic factor of cow's milk was increased by radiation; it protected rats against rickets and was to some extent effective in treating disease in rats, but such milk contains too little of the antirachitic factor to be of value in the treatment of rickets in children.

12. Robertson, E. C. "The effect of exposure to the sun on the susceptibility of rachitic rats to infection." *Can. Med. Assoc. Jour.*, 17 : 1033.

Method: Of several groups of rats in which well-marked rickets had been produced, half of each group was kept inside a laboratory with the windows closed and the other half was placed out of doors in the sunlight for two hours daily for four weeks. All were then infected with a gram-negative bacillus isolated from the nose of a normal rat, and were kept indoors under similar conditions for 7 to 26 days.

Findings: Two-thirds of all the rats kept inside continuously died from the infection, while only one-third of those exposed to the sun died after infection. The different groups of rats were exposed to the sun in different months, from February to June, inclusive, and the percentage that lived after infection was approximately 20 percent higher in the May and June groups than in the earlier groups.

13. Bartlett, W. M. "Protein requirement as determined in diabetic children." *Am. Jour. Dis. Ch.*, 32 : 641.

Problem: To determine the protein requirement of children for a positive nitrogen balance and normal growth and development.

Method: The study was made on a group of 6 diabetic children, aged 4 to 14. Their diets were accurately controlled, and they could be fed on low-protein high-calorie diets to advantage. Nitrogen studies were begun when the urine became sugar free and the blood sugar fell to the normal fasting level.

Findings: As the calorie requirement was fulfilled, each child came into a positive nitrogen balance and began to gain in weight. Growth curves, all of which started below the normal weight for age and height, came up to and went above the normal limits during the study, and a positive nitrogen balance was maintained on 0.6 to 1.0 gm. of protein per kg. of body weight.

The author concludes that this amount is probably sufficient for a normal child as well, because these children were essentially normal during the period of accurate control. He also concludes that the protein requirement of children varies inversely with the calorie intake, inversely with age and directly with the rate of growth.

14. Mitchell, H., H., and Beadles, J. R. "The protein value in nutrition of beef liver, beef heart, and beef kidney." *Jour. Biol. Chem.*, 71 : 429.

Method: Nitrogen metabolism studies were made of a series of 25 rats fed on a diet of which 8 percent was protein, consisting, in different

periods, of beef liver, beef heart, and beef kidney. The group was given 16 percent of beef liver as its protein for one period of observation.

Findings: The average biological values obtained at the 8 percent level were 74 for beef heart and 77 for kidney and liver, indicating that they are probably of equal protein value. These figures are equal to, or only slightly higher than, those obtained in other experiments for muscle meats—that is, 74 for pork and 69 for beef—and are less than the values of 83 to 86 obtained for milk proteins.

15. Osborne, T. B., Mendel, L. B., Park, E. A., and Winternitz, M. C. "Physiological effects of diets unusually rich in protein or inorganic salts." *Jour. Biol. Chem.*, 71: 317.

Method: Rats were fed on high protein diets (containing as much as two-thirds of the total calorie intake in protein) from weaning to maturity. In addition, animals raised to maturity on relatively low protein diets were given high protein diets. Rats were also fed on diets unusually high in organic salts.

Findings: Previous observations that rats could gain weight at a normal rate and grow to adult size on very high protein diets were confirmed. Mature animals raised on a low protein diet were able to adjust themselves satisfactorily to a high protein diet.

The blood of animals on the high protein feeding was somewhat higher in non-protein nitrogen than that of rats on ordinary laboratory diets.

Though the urea output was large, the urine of animals on high protein diets showed no abnormalities directly attributable to the protein.

High salt diets did not produce a similar hypertrophy, and urea fed in amounts equivalent to that derived from effective quantities of protein failed to produce an equally noticeable renal enlargement.

16. Hartwell, G. A. "The dietetic value of oatmeal proteins." *Bio-Chem. Jour.*, 20: 751.

Method: Ten rats were fed on a diet of oatmeal, butter, and salt mixture to determine the effectiveness of the oatmeal proteins in growth and reproduction. A second group of rats on an adequate stock diet were given the oatmeal experimental diet only after their litters were born, to test the effectiveness of the oatmeal for lactation. Rats in a third group were given diets of oatmeal and water supplemented by various proteins.

Findings: In the first experiment the rats grew well, but not so rapidly as those on control diets. Litters were born to all females, but the litters were small and many of the young were below the average weight at birth. The young could not be raised satisfactorily even when the mothers' diet was supplemented with bread and milk.

In the second experiment the young grew equally well whether the mother was fed on cooked or raw oatmeal. However, they did less well when the mother was on a diet of oatmeal, butter and salt mixture

In the third experiment the addition of casein produced a growth curve almost the same as the normal one. The extra protein also resulted in improved general condition, thick fur, and, even for those under standard weight, a normal general condition. The addition of food casein, glutin, gliadin, and egg albumin to the oatmeal diet, in the order given, produced better growth in the suckling young than the oatmeal and water alone.

17. Hoagland, R., and Snider, G. G. "The value of beef protein as a supplement to the proteins in certain vegetable products." *Jour. Agr. Res.*, 34: 297-308.

Method: Young albino rats were fed different combinations of beef protein with certain vegetable proteins.

Findings: Beef protein, mixed in equal proportions with the vegetable protein in a diet containing wheat, rolled wheat flour, corn meal, oatmeal, and rice, had approximately the same growth-promoting value as a ration containing the same percentage of beef protein alone. Rations containing equal parts of beef and navy bean or potato protein had much lower values.

The protein of the entire wheat kernel was more efficient than that of rolled wheat flour when each was the only source of protein in the diet. However, when each of these proteins was fed in combination with beef protein, half of the total protein coming from each source, this difference was not apparent. This indicates that rolled wheat flour is probably as good a source of protein as whole wheat flour, provided a reasonable amount of animal protein is included in the dietary.

18. Mitchell, H. H., Beadles, J. R., and Keith, M. H. "Value of cocoa and chocolate as sources of protein in the diet." *Jour. Biol. Chem.*, 71: 15.

Method: Ether-extracted cocoa was fed to young rats (1) as the sole source of protein in the diet, and (2) with milk, each supplying the same amount of nitrogen.

Findings: The coefficient of digestibility of cocoa nitrogen was 38, the average biological value of the absorbed nitrogen 37. The milk and cocoa diet indicated that no supplementary relation existed between the nitrogen constituents of milk and cocoa. Ingestion of cocoa caused an increased excretion of creatin and creatinine. The author concludes that cocoa and chocolate—to a greater extent because of its smaller percentage of crude protein—are unimportant protein foods.

19. Abelino, L., and Kobori, B. "The specific dynamic action of foodstuffs." *Bio-chem. Ztschr.*, 186: 1927. Abstracted in *Am. Jour. Dis. Ch.*, 34: 1060.

Method: A diet of meat was fed to normal and to phlorizinized rats.

Findings: The authors conclude that the experiment supports their belief that the form of energy acquired from food depends not so much

on the type of food as on the existing intermediary metabolism. During growth, after starvation, or after prolonged infectious diseases, less of the energy is given off as heat, whereas when thyroid substance is administered, heat production is increased.

20. Levine, S. Z., Wilson, J. R., and Rivkin, H. "The respiratory metabolism in infancy and in childhood. III. Glycogen storage in children." *Am. Jour. Dis. Ch.*, 31:496.

Problem: (1) To find the amount of carbohydrate mobilized for oxidation from the body stores of normal children during a given period of fasting under resting conditions; (2) to determine whether under similar experimental conditions the quantity differs in children with cyclic vomiting, and (3) to determine whether diabetes mellitus in children affects the capacity for glycogen storage.

Method: Five children were studied, two normal girls, one obese girl, one girl with cyclic vomiting, and one boy with diabetes. All except the boy were given high carbohydrate diets for from five to fourteen days before fasting. The fasting period extended for from 74 to 79 hours. The girl with cyclic vomiting fasted only 55 hours. Calorimeter observations were used for determining the daily metabolism.

Glycogen is deposited during high carbohydrate feeding, and carbohydrate is mobilized for oxidation during starvation. Glycogen was adequately formed in the patient with cyclic vomiting. A defective mechanism for glycogen formation was a factor in producing low tolerance for carbohydrate in the boy with diabetes. Under maintenance conditions the relative amounts of carbohydrate mobilized from well-replenished stores and oxidized during short periods of fasting are approximately the same in normal children irrespective of nutritional state.

21. Mitchell, H. S. "Comparative physiological values of different amounts of lactose based on growth and fecal analysis." *Am. Jour. Physiol.*, 79:542.

Problem: To ascertain at what level of lactose intake normal growth in rats might be promoted while still maintaining a predominance of B. acidophilus in the intestine.

Method: Six groups of rats were placed on diets containing 60 percent of carbohydrate varying from all lactose through varying percentages of lactose and starch to all starch.

Findings: Growth was poor on diets containing 60 and 45 percent of lactose, but was practically normal on 30 percent of lactose or less. B. acidophilus predominated in rats on 60, 45, and 30 percent lactose. Therefore, on 30 percent level lactose will permit normal growth and at the same time promote an aciduric type of intestinal flora.

22. Mitchell, H. S. "Comparative physiological values of five carbohydrates, based on growth and fecal analysis." *Am. Jour. Physiol.*, 79: 537.

Problem: To determine the relative physiological values of starch, dextrine, lactose, sucrose, and maltose, in regard to growth, carbohydrate loss in the feces, and intestinal flora conditions.

Method: Five groups of rats were fed on similar diets containing 60 percent of carbohydrate, but differing in the kind of carbohydrate. Their general condition was observed, and weights were taken twice a week. Fecal analyses were made several times a month.

Findings: Intestinal flora indicate that the acidophilus percentage parallels the amounts of sugar lost in the feces, but in general the rate of growth is in the reverse ratio. Lactose promoted the best growth of acidophilus, but the poorest growth of the animal. Cornstarch promoted excellent growth but no change in the intestinal flora.

23. Levine, H., and Smith, A. H. "Growth experiments on diets rich in fats." *Jour. Biol. Chem.*, 72: 223.

Method: Rats were fed on experimental diets, constant in their protein and salt contents, which were adequate, but varying in their fat and carbohydrate proportion from a normal diet to one in which 86 percent of the calories was in the form of fat and practically no preformed carbohydrate was present.

Findings: The rats on the high fat rations grew at a normal rate when their protein, vitamin, and salt requirements were met. Rats receiving a maximum of calories in the diet in the form of fat grew as efficiently, measured by energy cost, as when mixtures of both fat and carbohydrate calories were present in the diet. Rats on the high fat diets utilized from 98 to 99 percent of the ingested fat.

24. Sherman, H. C., and Quinn, E. J. "The phosphorus content of the body in relation to age, growth, and food." *Jour. Biol. Chem.*, 67: 667.

Method: Normal rats fed for generations on a known adequate diet were ashed and the phosphorus contents of their bodies determined at different ages. Rats on a second diet, adequate, but lower in calcium than that of the first group, were also ashed at various ages.

Findings: The average percentage of phosphorus in the body of the normal white rat was found to increase from 0.34 percent at birth to 0.49 at 15 days, and to be from 0.53 to 0.56 at 28 days; from 0.57 to 0.65 at 61 days; from 0.62 to 0.68 at 3 months; from 0.65 to 0.69 at 4 months; and from 0.70 to 0.75 in adult life.

At the age of 15 days and after, the total weight of phosphorus averaged higher in males than in females, but only because of their greater average body weights. Females which had not borne young had a higher phosphorus percentage than males of the same age, inheritance,

and dietary history. Females which had borne and suckled young showed lower percentages of phosphorus than those which had not raised young. Such animals showed a tendency to regain at least a part of this loss, apparently somewhat in proportion to the length of time elapsing since the last lactation period. The gains and losses of calcium and phosphorus, while not arithmetically parallel, were chemically interdependent. The calcium intake limited the storage of both calcium and phosphorus; when this was low, even the addition of cod-liver oil did not raise the calcium or phosphorus storage. The addition of calcium, however, increased the storage of both elements.

The body of the rat in making normal growth and development from birth to maturity must multiply its original weight by about 70, its original phosphorus by about 150, and its original calcium by about 340.

25. Jones, R. "Studies on inorganic salt metabolism in dogs. III. On certain factors which influence the deposition and resorption of bone." *Am. Jour. Physiol.*, 79 : 694.

Problem: To determine the influence of inherent metabolic fault and of diets of low and high alkalinity in the calcification of bones in puppies.

Method: Clinical examinations, roentgenographs, blood studies, and urine analyses of 27 puppies were made at the beginning and during the process of the experiment. The puppies were fed on the basal ration, the basal ration plus a salt mixture high in calcium but varying in potential alkalinity, and the basal ration plus high phosphorus and varying in potential alkalinity.

Findings: Normal puppies kept in indoor pens grew satisfactorily, with no evidence of faulty mineral metabolism, on the basic diet. Puppies with an inherent metabolic fault under the same conditions developed rickets-like bone changes.

Normal animals tolerate a certain excess of alkali in diets both high and low in P, but a larger excess reverses the calcifying mechanism. Neutralization of the excess alkali initiates the healing process, which progresses rapidly in originally normal animals and more slowly in subnormal animals.

The experiments indicate that the seat of faulty mineral metabolism is in tissues rather than in the gastro-intestinal tract. Calcification appears dependent upon the inherent metabolic state and diet.

26. Krane, W. "Mineral metabolism and calcium supply." *Pflügers. Arch.*, 217 : 1927, 24-35. Abstracted in *Phys. Absts.*, 12 : 450.

Findings: Calcium equilibrium is reached in the human between 1.2 and 1.5 gm. per day. $CaCl_2$ added to the diet is absorbed to a considerable extent, but has no influence on nitrogen metabolism. Retention of calcium by the body is accompanied by retention of phosphate,

leading to the conclusion that a large part of this calcium is stored as phosphate.

27. Hart, E. B., Steenbock, H., Scott, H., and Humphrey, G. C. "Dietary factors influencing calcium assimilation. X. The influence of ultra-violet light upon calcium and phosphorus metabolism in milking cows." *Jour. Biol. Chem.*, 73: 59.

Method: Three milking cows fed on an adequate diet were kept in a basement room with closed windows and only ordinary electric light for illumination for three weeks, then under the same conditions for four weeks longer, during which time the cows were irradiated one hour daily by a quartz mercury vapor lamp.

Findings: The ultra-violet light seemed to have no influence on the milk production of cows or on the calcium and phosphorus content of the milk secreted. The authors suggest that the cow derives its anti-rachitic vitamin from the feed, differing in this respect from man, goats, chickens, and probably rats, all of which can be influenced favorably by the short wave lengths of solar radiation. Exposure of the dairy cow to sunlight may, however, be beneficial.

28. Hart, E. B., Elvehjem, C. A., Waddell, J., and Herrin, R. C. "Iron in nutrition. IV. Nutritional anemia on whole milk diets and its correlation with the ash of certain plant and animal tissues or with soluble iron salts." *Jour. Biol. Chem.*, 72: 299.

Problem: To determine the effect of the ash of alcoholic extracts of lettuce, cabbage, corn meal, spleen marrow, and of ferrous sulphate on nutritional anemia induced in rabbits by whole milk diets.

Method: Preventive and curative experiments were carried on with rabbits on diets of whole milk, supplemented with fresh or dried lettuce, cabbage, or the ash of dried lettuce or cabbage or of the alcoholic extract of lettuce or cabbage, corn meal, ash of corn meal, dried spleen marrow, or its ash. These supplements to the milk diet were tried with and without inorganic iron.

Findings: The results indicate that the milk deficiency leading to nutritional anemia is inorganic rather than organic.

29. de Gironcoli, Ugo. "Clinical study of the vitamin A content of vegetable oils." *Pediatri Revista*, 34: 1926, 1333.

Problem: To determine the vitamin A content of olive oil and soy-bean oil.

Method: Infants from 2 to 12 months old were fed on a diet containing olive oil and no animal fat, then on a diet containing soy bean oil and no animal fat.

Findings: The olive-oil diet resulted in satisfactory development. With the soy bean oil the infants developed anemia, irritability, apathy,

vomiting, etc. These conditions were improved or cured by cod-liver oil. The author concludes that olive oil contains some vitamin A, but soy bean oil none.

30. Daniels, A. L. "Vitamin A content of fecal excretion of a breast-fed and an artificially fed infant. Preliminary report." *Proc. Soc. Expt. Biol. and Med.*, 23: 824.

Method: Two groups of rats, kept on a diet low in vitamin A until they developed characteristic symptoms of infection of the upper respiratory tract, were fed the ether extract of the fecal extraction (1) of a seven-months-old baby receiving a milk-dextrimaltose feeding mixture, and (2) of a six-months-old breast-fed baby receiving cod-liver oil and orange juice in addition to breast milk.

Findings: With one exception, all the animals receiving the extract of the artificially fed baby's stool gained in weight and recovered from the infection. All those receiving the extract from the breast-fed baby's stool died. This indicates that a breast-fed baby can absorb vitamin A more completely than can an artificially fed baby.

31. Koessler, K. K., Maurer, S., and Loughlin, R. "The relation of anemia, primary and secondary, to Vitamin A deficiency." *Jour. Am. Med. Assoc.*, 87: 476.

Problem: To determine the effect on anemia of diets deficient in and rich in vitamin A.

Method: Observations of rats on experimental diets deficient in vitamin A, with and without the addition of cod-liver oil or butter.

Findings: Blood regeneration cannot take place without vitamin A. The addition of vitamin A to the diet of animals long depleted in their vitamin A reserve brings about the rapid formation of new blood cells. The rate and intensity of the blood regeneration is a function of the quantity of vitamin A added.

32. Golding, J., Soames, K. M., and Zilva, S. S. "The influence of the cow's diet on the fat soluble vitamins of winter milk." *Biochem. Jour.*, 20: 1306.

Problem: To determine the effect of kale and of cod-liver oil in the cow's diet on the content of vitamins A and D in its milk.

Method: Butter was made from the mixed milk of two cows in each of three groups, one fed a basal diet of oat straw, roots, and meal mixture, the second on the same diet except for kale in place of the roots, and the third on the basal diet plus cod-liver oil. Rats on vitamin A free and on vitamin D free diets were fed these different butters as sole sources of the missing vitamins.

Findings: The inclusion of kale in the winter ration of the cow raises the vitamin A content, but not the vitamin D content of the milk. Cod-liver oil in the cow's winter ration raises both the vitamin A and

the vitamin D content of the milk. The experiment confirmed previous observations that the administration of high doses of cod-liver oil to cows reduces the percentage of fat in their milk.

33. Macy, I. G., Outhouse, J., Long, M. L., and Hoobler, B. R. "A study of the vitamin A and B content of mixed human milk." *Jour. Biol. Chem.*, 67: 11.

Problem: To determine the efficiency of vitamins A and B of mixed human milk in the growth and reproduction of rats.

Method: Growing rats were fed on diets adequate in all respects except in the vitamin being tested, and these diets were supplemented with mixed milk from ten to sixteen wet nurses.

Findings: On diets deficient in vitamin B, no rats grew on less than 12 cc. of milk as the only source of B; 20 cc. was necessary for approximately normal growth. When rats received 25 and 30 cc. daily, growth and the consumption of the basal ration were stimulated. Sexual maturity in females was delayed when less than 18 cc. of milk was given. For normal ovulation, 20 to 30 cc. was necessary. Rats on a diet deficient in vitamin A grew normally when their diet was supplemented by 2 cc. of human milk daily.

34. Macy, I. G., Outhouse, J., Long, M. L., and Graham, A. "Human milk studies." *J. Biol. Chem.*, 73: 153-174.

Problem: To make a quantitative estimation of the vitamin A and vitamin B content of mixed human milk, and to determine the content of vitamins A and B in cow's milk as compared with human milk.

Method: Mixed milk from a group of wet nurses on an average American dietary was fed to rats on diets deficient in vitamin A and to another group of rats on diets deficient in vitamin B. The content of vitamins A and B in mixed milk from 450 Holstein cows fed on an unchanging standard ration was studied under experimental conditions identical with those for human milk.

Findings: Milk from women on the average American dietary apparently is rich in vitamin A; 2.5 to 3 cc. of the mixed milk in an otherwise vitamin A free diet is enough for normal growth and reproduction in the rat. This amount, however, was too low for normal lactation, as was evidenced by the slight subnormality in the rats at weaning age and the little vitamin A the mother was able to transfer to the young although she appeared in good condition.

The vitamin B content of mixed human milk is low. For normal growth in rats on a vitamin B free diet, 25 to 35 cc. was needed, and even these amounts were insufficient for normal reproduction and lactation. From this the authors advise emphasis on foods rich in vitamin B in the diets of pregnant and lactating women, and their early introduction in the nursing period of the infant. For satisfactory growth of the rats, 3 cc. of fresh raw cow's milk was adequate, but this amount

did not always protect against secondary pathological conditions. At autopsy, 77 percent of these rats had single or double mastoid involvement.

35. Mitchell, H. H., and Carman, G. C. "Effect of excessive amounts of vitamin B on the basal metabolism of rats of different ages." *Am. Jour. Physiol.*, 76: 385.

Method: Five litters of rats were fed on a basal ration adequate except for vitamin B, and in addition received regulated amounts of yeast vitamin.

Findings: For rats ranging in age from 90 to 190 days, the basal heat production for males per square meter of body surface per day appears to be higher than for females. Within the age interval noted, age does not seem to have an appreciable effect in modifying the basal heat production of rats. In rats from 30 to 40 days of age, the basal metabolism is distinctly higher. Excessive amounts of vitamin B up to ten times the estimated requirements of rats do not appreciably modify their basal metabolism.

36. Hughes, J. S., Fitch, J. B., Cave, H. W., and Riddell, W. H. "Relation between the vitamin C content of a cow's ration and the vitamin C content of its milk." *Jour. Biol. Chem.*, 71: 309.

Method: Guinea pigs were fed on a scurvy-producing diet supplemented by milk from cows on a diet adequate in protein, energy, and minerals, but very low in vitamins A, B, and C. A test group of pigs was fed the same scurvy-producing diet plus milk from cows on diets adequate in these vitamins.

Findings: The results of these experiments differed from those of other investigators in indicating that the vitamin C content of a cow's ration has little if any influence on the vitamin C content of its milk.

37. Greenebaum, J. V., Selkirk, T. K., Otis, F. A., and Mitchell, A. G. "Effects of diet during pregnancy on development of rickets in the offspring." *Jour. Am. Med. Assn.*, 87: 1973.

Problem: To determine the protective effect of an adequate diet for the mother during pregnancy on the development of rickets in the offspring.

Method: Twenty-five pregnant women, physically normal and coöperative, who previously had had rachitic children, were observed during pregnancies in which their diets were supplemented with vegetables, cereals, fruit, eggs, and milk. The supplementary foods were discontinued when the children were born. These children, who did not receive cod-liver oil after birth, were watched for eight months and compared with a control group of 25 children of the same social status

who received cod-liver oil but whose mothers during pregnancy did not receive supplements to their diets.

Findings: Every child in the control group developed rickets before the eighth month. Though supplementary feedings increased the calories and improved the diets of the pregnant mothers, their diets were still below standard in calories, iron, and phosphorus, though adequate in calcium. The chronically poor appetites of the mothers, rather than the supply of food, were the cause. Mothers returned to their old diets at the births of their children. Of the 22 babies followed through the eight months, 1 baby showed no rickets, 15 babies showed mild rickets, 1 baby showed moderate rickets, and 5 babies showed marked rickets.

The authors conclude that if the diet of the mother during the last three months of pregnancy can be made approximately correct in caloric and mineral content, this, while it will not prevent rickets, will have a controlling influence on the development of the disease in her offspring.

38. Hess, A. F., and Weinstock, M. "Puffer fish oil; a very potent anti-rachitic; its elaboration by fish deprived of sunlight." *Proc. Soc. Expt. Biol. and Med.*, 23: 407.

Problem: To determine the comparative antirachitic value of puffer fish oil and cod-liver oil, and to determine the relative importance of diet of the fish and intensity of the solar rays in nature in the potency of the oil.

Method: Rat-feeding experiments.

Findings: Puffer fish oil was concluded to be fifteen times as potent as the most active specimens of cod-liver oil. The authors conclude that the antirachitic quality of the fish-liver oil is dependent upon the diet of the fish rather than on ultra-violet radiation.

39. Moore, C. U., Brodie, J. L., and Hope, R. B. "Some effects upon the young of inadequate maternal diets. Polyneuritis and hemorrhages." *Am. Jour. Physiol.*, 82: 350.

Problem: To determine the effect of vitamin B deficiency in the diet of the mother on the young.

Method: Rats were fed on a basal diet adequate for normal growth from weaning to sexual maturity, but low in vitamin B.

Findings: (1) Diets adequate in vitamin B for the normal growth and reproduction of the mother are not necessarily adequate for the successful nursing of her young. On a diet containing 2 percent yeast as a sole source of vitamin B, the size of the litter was reduced and 73 percent of the young died before the end of the weaning period. One-half of these deaths occurred during the first week; the remaining deaths occurred in the third week. Lemon juice added to diet had no visible effect on the hemorrhagic condition or on the paralysis. (2) An increase of the yeast percentage from 2 to 7 percent of the mother's diet decreased the mortality of the offspring from 72.9 percent to 9.3

percent, practically eliminated the paralysis, and greatly lessened the hemorrhages in the young. (3) Paralytic rats receiving 2 percent yeast and the experimental ration recovered completely. (4) On this experimental diet none of the adults showed any clinical signs of deficiency. (5) The experiment indicates that the so-called water-soluble B vitamin contains separate antineuritic and growth fractions, the proportion of which varies in different materials.

III. Summary of Recently Completed Research

These abstracts of research studies indicate the trend of the research on physical growth. They are, obviously, only a sample of the work that has been done up to the present. Of the studies reported, over 56 percent have used animals in their experiments, while approximately 20 percent have dealt with normal children. In the remaining 24 percent the experimental work was done with sick children, with dead fetuses, or with a combination of human beings and animals, such as testing the vitamin content of mother's milk by the use of rats. The experimental work of the entire field shows the need for more direct observations on normal children.

The different systems in the body have had special, but by no means exhaustive, study. Bone development has come in for its share of examination, both to determine the kind of growth and as an index of growth. A greater use of X-rays would no doubt add considerably to the information already available. Though extensive study has been made of the circulatory system, only a small part of this has concerned children directly. Several blood-pressure studies have been noted, but they are not entirely in agreement with each other. The sizes of various organs and the relation of such things as race, nutritional state, and stage of growth to size have had some attention. The realization of the importance of the endocrine glands has led to numerous studies of their effect on growth, but merely a beginning has been made in this field.

Among the anthropometric studies the search for indices of normal growth stands out. Height and weight have been used a great deal as indices, and with these, growth curves have been developed. Factors, such as temperature and season, which appear to influence these curves have been studied in relation to them. Anthropometric studies have included many different body measures and the devising of formulas from these for determining the surface area of the body.

In nutrition an almost endless number of animal experiments have been carried on, and much of our present-day knowledge of the subject depends on these experiments. The difficulty of carrying on controlled experiments with human subjects makes the use of animals highly desirable. However, the application of the information so gained to human beings needs caution. Such work has included studies of appetite, of dietary deficiencies, of different foods and their effect on growth, and of irradiation of foods, of mothers, and of offspring, both by sunlight and by ultra-violet lamp.

Less extensive studies have been made with children as the subjects. Protein requirements have been determined, and protein and other foodstuffs have had individual study to determine their usefulness in growth. Minerals and vitamins have received a large share of attention. Animal experiments have shown the effect of diets deficient in these substances and so have helped in the proper interpretation of symptoms in children which suggest dietary deficiencies.

Besides the research recently reported through the regular channels, such as the scientific journals referred to for the preceding abstracts, certain pieces of work have been done without mention of which this survey would be incomplete.

The measurement of physical growth processes by measures made on the body has been stimulated by Pirquet's[2] use of sitting height in determining ideal weight; by Bornhardt's use of chest measurements in addition to height in determining normal weight; by Dreyer and Hanson's[3] use of chest girth and height in predicting the weight of the adult, and later their substitution of stem length for standing height. Gray[4] concluded from his studies that, fundamentally, weight must be proportioned to cubic mass rather than to length of surface. He prepared tentative tables from measurements of height, weight, stem length, and chest girth of 380 boys from 6 to 20 years of age in three private boarding schools.

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[2] Pirquet, C. *An Outline of the Pirquet System of Nutrition.* Philadelphia: Saunders, 1922.

[3] Dreyer, G. *The Assessment of Physical Fitness.* New York: Hoeber, 1921.

[4] Gray, H. "Size and weight in one hundred and thirty-six boarding school boys. I" "Ideal tables of size and weight of private school boys. II" *Am. Jour. Dis. Ch.*, 22: 1921, 259. "Sitting height and stem length in private school boys." *Ibid.*, 23: 1922, 406.

Applying these tables to 114 normal boys, he decided that the most valuable single measurement relation was that of weight to chest girth, and next to this was the weight-to-height relationship. Faber[5] seems to have shown by a series of elaborate calculations that the validity of the relationship with sitting height depends on the degree of correlation between sitting height and body surface.

Through anthropometric studies of constitutional types, Bardeen[6] has developed an "index of build" obtained by dividing the weight of the individual by the cube of his height. He has worked out according to this system, indices for various ages beginning with the first few months of birth. Davenport[7] also has developed an index of build, but he considers the chest girth divided by the stature the most desirable ratio, with weight divided by the square of stature as second in preference. Body-build he classifies under two main heads—fleshy and slender—with intermediate builds resulting from different combinations of the factors which determine build. Stockard,[8] like Davenport, defines two constitutional types of build which he calls the "lateral," or slow-growing type, and the "lineal," or fast-growing type. His extensive studies of hormones and their effects on growth have led him to believe that, though the genes of both types are probably inherited by the individual, developmental factors may or may not permit the expression of one or more developing characters. Retardation at any period may influence the subsequent production of growth-promoting hormones and so modify the types of structure.

These men and others working along similar lines are continuing their studies and without doubt will make still further contributions to the knowledge of physical growth processes.

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[5] Faber, H. K. "A critique of the Pirquet system of feeding." *Am. Jour. Dis. Ch.*, 75: 1923, 339.

[6] Bardeen, C. R. *The Height-Weight Index of Build in Relation to Linear and Volumetric Proportions and Surface Area of the Body during Postnatal Development.* Carnegie Inst. of Washington, Publication 272: 1920.

[7] Davenport, C. B. *Body Build and Its Inheritance.* Carnegie Inst. of Washington, Publication 329, 1923.

[8] Stockard, C. R. *Hormones and Structural Development.* (Beaumont Foundation Lectures, Series 6.) Wayne County Medical Society, Detroit, Mich., 1927.

IV. Studies Now in Progress

1. Anatomy and Physiology

a. General

1. Boas, F. "Relative importance of heredity and environment." Columbia University, New York City, N. Y.
2. Bovie, W. T. "Biological effects of light." Harvard University, Cambridge, Mass.
3. Chandler, A. B. "Growth in relation to season, activity, and diet." McGill University, Montreal, Canada.
4. Davenport, C. B. "Experimental modification of growth in mammals, with possible application to growth in humans." Department of Genetics, Carnegie Institute of Washington, Cold Springs Harbor, Long Island, N. Y.
5. Dodge, C. T. J. "Growth curves of colored and white infants during the first eighteen months." Western Reserve College of Medicine, Cleveland, Ohio.
6. Eliot, M. M. "Growth of infants from 2 weeks to 3 years." Yale Medical School, New Haven, Conn.
7. Elvin, V. "Early physical growth and activities of children." Bureau of Educational Experiments, New York, N. Y.
8. Ford, H. W. "A study of motor abilities of preschool children." Kansas State Agricultural College, Manhattan, Kan.
9. Feldman, H. W. "Correlation between parents and offspring as regards fertility, growth and longevity; studies upon four species of rats with possible applications to human genetics." Bussey Institute, Boston, Mass.
10. Hausman, L. A. "The coloration and structure of human hair with reference to race and age." Rutgers College, New Brunswick, N. J.
11. Blatz, W. E. "Bladder control in infancy and early childhood." University of Toronto, Toronto, Ont., Can.
12. Hrdlicka, A. "The growth and development of the child and adolescent in different races." U. S. National Museum, Washington, D. C.
13. Justin, M. "Factors affecting seasonal variation in the growth curve of children"; also "Age factors in the resumption of growth in stunted children." Kansas State Agricultural College, Manhattan, Kan.
14. McKay, H. "Seasonal variations in growth of preschool children." Ohio State University, Columbus, Ohio.
15. McKenzie, W. L. "Normal development of infants and preschool children." Harvard Medical School, Cambridge, Mass.
16. O'Brien, R. "Effects of various fabrics worn by infants on their skin temperature." Bureau of Home Economics, Washington, D. C.

17. Pyle, I. S. "Physical growth and posture of early childhood." Child Welfare Research Station, Iowa State University, Iowa City, Iowa.
18. Reed, C. I. "Physiological action of light." Baylor Medical School, Dallas, Texas.
19. Richdorf, L. F. "Growth in infancy and early childhood." University of Minnesota, Minneapolis, Minn.
20. Roberts, L. J. "Colds in the nursery school and their prevalence." University of Chicago, Chicago, Ill.
21. Scammon, R. E. "Physical growth and anatomy of the fetus and the child." University of Minnesota, Minneapolis, Minn.
22. Smith, R. M. "Normal development of infants and preschool children." Harvard Medical School, Cambridge, Mass.
23. Smith, S. "Frequency of postural scoliosis in children." University of Washington, Seattle, Wash.
24. Williams, J. W. "Correlation of obstetrical factors with the developmental history of the first year." Johns Hopkins Hospital, Baltimore, Md.
25. Sweeny, M. E., Wilson, C. A., Hejinian, L., and King, H. "Studies in the postural characteristics of a group of young children." Merrill-Palmer School, Detroit, Mich.
26. Sholley, R., Sweeny, M. E., Wilson, C. A., and Hejinian, L. "Indoor and outdoor activity of a group of young children." Merrill-Palmer School, Detroit, Mich.
27. Breckenridge, M., Wilson, C. A., Sweeny, M. E., and Hejinian, L. "Physical factors in enuresis." Merrill-Palmer School, Detroit, Mich.

b. Bones, Joints and Teeth

28. Bunting, R. W. "The control of dental caries through diet and specific medication." University of Michigan, Ann Arbor, Mich.
29. Carey, E. J. "The development and growth of bone in the child and in experimental animals." School of Medicine, Marquette University, Milwaukee, Wis.
30. Clark, E. R. "Factors affecting growth of bones." School of Medicine, University of Pennsylvania, Philadelphia, Pa.
31. Cohen, J. T. "The growth and development of the head, face and jaws, studied by casts and measurements." College of Dentistry, University of Minnesota, Minneapolis, Minn.
32. Eliot, M. M. "X-ray studies of the ulna and radius and of the centers of ossification of carpal bones in infants." Yale Medical School, New Haven, Conn.
33. Hellman, M. "Developments of the face and dentition." American Museum of Natural History, New York City, N. Y.
34. Lowman, C. L. "Studies in the relation of body balance and eye balance and their possible relation to spinal alignment." Orthopedic Hospital School, Los Angeles, Calif.

35. McCollum, E. V. "Bone growth as influenced by diet." Johns Hopkins University, Baltimore, Md.
36. Sullivan, E. F. "Influence of teeth upon the development of bones of the face." Tufts College, Boston, Mass.
37. Noble, L., Sweeny, M. E., Wilson, C. A., and Hejinian, L. "Bone growth of a group of children as indicated by X-rays of the wrist and upper arm." Merrill-Palmer School, Detroit, Mich.
38. Lewis, S., and Lehman, I. "Dental orthopedic growth studies. The relation between the teeth and dental arch development in the deciduous and mixed dentures." Merrill-Palmer School, Detroit, Mich.

c. Digestion

39. Cole, L. J. "Gastric secretion in infants, children and adults." University of Wisconsin, Madison, Wis.
40. Mulinos, M. G. "Physiology of the gastro-intestinal tract of infants and children with collateral experimentation on animal subjects," and "Gastric hunger and digestion curves." University of Minnesota, Minneapolis, Minn.
41. Scott, G. H. "Quantitative studies of the development of the digestive tract in the human fetus and infant." Loyola University Medical School, Chicago, Ill.

d. Circulation

42. DeBuy, L. R. "The heart and thymus in children." School of Medicine, Tulane University, New Orleans, La.
43. Halsey, R. H. "Heart disease in young children." New York Post-Graduate Hospital, New York City, N. Y.
44. Kleiner, I. S. "Nature of the sugar of the blood. Flower Hospital, New York City, N. Y.
45. Lincoln, E. M. "The normal heart in childhood." College of Physicians and Surgeons, Columbia University, New York City, N. Y.
46. Mixsell, H. R. "Blood research on the newborn." Bellevue Medical College, New York City, N. Y.

e. Endocrines

47. Hjort, A. M. "Pharmacology of the parathyroid glands, with special reference to the growth of bone; the effect of removal of the parathyroid glands and the effect of the administration of parathyroid extract to normal and parathyroidectomized animals." Dartmouth Medical School, Hanover, N. H.
48. Hoad, L. A. "Effect of parathyroid extract on calcium balance of infants." Cornell University College of Medicine, New York City, N. Y.

49. Jewett, S. P. "The rôle of the endocrine glands in behavior disorders of childhood." N. Y. School of Social Work, New York City, N. Y.
50. Read, J. M. "Endocrine aspects of growth and development." Stanford Medical School, San Francisco, Calif.
51. Uhlenhuth, E. "Influence of the endocrines upon development." University of Maryland Medical School, Baltimore, Md.

f. Special Systems

52. Freeman, R. G., Jr. "Significance of indicanuria in preschool children." College of Physicians and Surgeons, Columbia University, New York City. N. Y.
53. Myers, V. C. "Possible relation of the excretion of creatin and creatinine coefficient to fatigue in young children." Iowa State University, Iowa City, Iowa.

g. Anthropometry

54. Bardeen, C. R. "Studies of height, sitting height, and weight, relative to one another, and to age, sex, and race." University of Wisconsin, Madison, Wis.
55. Boyd, E. "Measurements of surface area of young children." University of Minnesota, Minneapolis, Minn.
56. Cates, H. A. "Anthropometry of children of preschool age." University of Toronto, Toronto, Canada.
57. DuBois, E. F. "Height-weight formula for determining the surface area of children." Cornell University Medical College, New York City, N. Y.
58. Lincoln, E. M. "Proportional measurements in childhood." College of Physicians and Surgeons, Columbia University, New York City, N. Y.
59. Sawtell, R. O. "Growth of children from fourteen months to seven years, studied by anthropometric measurements, the X-ray, and teeth eruption." Bureau of Educational Experiments, New York City, N. Y.
60. Thompson, H. "Anthropometric growth curves for the period from birth to two years." Yale Psycho-Clinic, New Haven, Conn.
61. Tilton, J. "Health and anthropometric measurements in relation to body volume." Harvard University, Cambridge, Mass.

2. Nutrition

a. General

62. Arnold, L. "The influence of food upon the hydrogen ion concentration and the endogenous bacterial flora of the gastro-intestinal tract of infants." Loyola University, Chicago, Ill.

63. Brodie, J. L. "Relation of maternal diet during pregnancy and lactation to the nervous development of the young." University of Oregon Medical School, Portland, Ore.
64. Chaney, M. S. "Appetite of preschool children." Kansas State Agricultural College, Manhattan, Kan.
65. Clark, E. R. "Relation of growth of lymphoid tissue to diet." School of Medicine, University of Pennsylvania, Philadelphia, Pa.
66. Croll, H. M. "Diet, exercise, and metabolism in relation to body weight." University of Illinois, Urbana, Ill.
67. Goodeve, M. D. "Eating habits of preschool children." Toronto University, Toronto, Ontario, Canada.
68. Hill, R. L. "The adaptability of various milks to the nutrition of infants." Utah Agricultural College, Logan, Utah.
69. Jackson, C. M. "Effects of malnutrition upon structure and growth; a study of autopsy data." University of Minnesota, Minneapolis, Minn.
70. Jeans, P. C. "The causes of nutritional disturbances in infancy." Iowa State University, Iowa City, Iowa.
71. Kleiner, I. S. "Influence of feeding upon lactation." Flower Hospital, New York City, N. Y.
72. Leichsenring, J. M. "The diet of normal preschool children and its relation to seasonal variation in growth." University of Minnesota, St. Paul, Minn.
73. Macy, I. G. "The physiological and psychological factors influencing human milk secretion," and "Effect of diet upon reproduction and lactation and subsequent growth of the offspring." Merrill-Palmer School, Detroit, Mich.
74. McKenzie, W. L. "The re-establishment of mother's milk," and "A comparison of the three and four hour nursing interval in early infancy." Harvard Medical School, Cambridge, Mass.
75. Mendel, L. B. "Nutrition and growth research on animal subjects; diet and fat production; dwarfing by diet; acceleration of growth by diet." Yale University, New Haven, Conn.
76. Murlin, J. R. "Nutrition of children with special reference to the mechanism of heat regulation." University of Rochester Medical School, Rochester, N. Y.
77. Nelson, P. M. "Rôle of maternal diet in the lactation of the young, using white rats." Iowa State College, Ames, Iowa.
78. Roberts, L. J. "Food requirements of children of various ages," and "Problems of appetite, hunger, and feeding of children." University of Chicago, Chicago, Ill.
79. Rose, M. S. "Laboratory investigations of the nutritive value of various types of children's diets." Teachers College, Columbia University, New York City, N. Y.
80. Rowntree, J. I. "The mental development of infants and preschool children in relation to their states of nutrition." University of Washington, Seattle, Wash.

81. Sure, B. "Dietary requirements for reproduction." University of Arkansas, Fayetteville, Ark.
82. Sweeny, M. E., Walker, M., and Hejinian, L. "Fundamental factors affecting the attitudes of children toward the food served them." Merrill-Palmer School, Detroit, Mich.
83. Sweeny, M. E., Hejinian, L., and Wilson, C. A. "A nutritional investigation over a period of years of the growth and development of a group of average American children living under good environmental conditions." Merrill-Palmer School, Detroit, Mich.
84. Sweeny, M. E., Allen, L. A., Hartley, S., and Hejinian, L. "A study of the food intake of 124 children between two and five years." Merrill-Palmer School, Detroit, Mich.

b. Metabolism

85. Benedict, F. G. "Nutrition and metabolism studies." Nutrition Laboratory of the Carnegie Institution of Washington, Boston, Mass.

c. Irradiation

86. Bailey, E. W. "Effects of irradiation of pregnant mothers on structural and mental development of children." University of California, Berkeley, Cal.
87. Dozier, C. C. "Hygiene of clothing; ultra-violet ray penetration." Utah Agricultural College, Logan, Utah.

d. Protein

88. Daniels, A. L. "Relation of nitrogen metabolism and physical development in infants." Child Welfare Research Station, Iowa State University, Iowa City, Iowa.
89. Hess, J. H. "Comparative value of gelatin when added to infants' diet." College of Medicine, University of Illinois, Chicago, Ill.
90. Lewis, H. B. "Rôle of amino acids and protein in growth and nutrition." University of Michigan, Ann Arbor, Mich.

e. Carbohydrate

91. Kleiner, I. S. "Different cereals as milk modifiers." Flower Hospital, New York City, N. Y.

f. Fat

92. Croll, H. M. "Metabolism of odd carbon fats." University of Illinois, Urbana, Ill.

g. Minerals

93. Bergeim, O. "Intestinal absorption of calcium and phosphorus in normal and rachitic children." College of Medicine, University of Illinois.
94. Blunt, K. "Calcium and iron metabolism of children." University of Chicago, Chicago, Ill.

95. Clark, G. W. "Mineral metabolism of the pregnant mother, of the child, and of the normal adult." University of California, Berkeley, Calif.
96. Daniels, A. L. "Conditions affecting calcium and phosphorus retention in infants." Child Welfare Research Station, Iowa State University, Iowa City, Iowa.
97. Greenwald, I. "Phosphorus compounds of blood and milk, and possible relation of these to rickets." Harriman Research Laboratories, New York City, N. Y.
98. Leichsenring, J. M. "The iron requirement of children." University of Minnesota, St. Paul, Minn.
99. McCollum, E. V. "Iron assimilation." Johns Hopkins University, Baltimore, Md.
100. McKay, H. "Phosphorus intake of the preschool child as shown by a dietary study." Ohio State University, Columbus, Ohio.

h. Vitamins

101. Daniels, A. L. "Results of vitamin A deficiency." Child Welfare Research Station, Iowa City University, Iowa City, Iowa.
102. Dubin, H. E. "Isolation of the active principles, the fat-soluble antirachitic and antiophthalmic vitamins of cod-liver oil." Biochemical Department, H. A. Metz Research Laboratories, New York City, N. Y.
103. McCollum, E. V. "Isolation of vitamins." Johns Hopkins University, Baltimore, Md.
104. Sure, B. "The rôle of vitamins E and B in lactation." University of Arkansas, Fayetteville, Ark.

V. Summary of Research in Progress

The trend of research in progress on the physical growth of preschool children indicates that increasing emphasis should be placed on the integration of the findings with those in other scientific fields. The child's body and mind, his behavior, and his habits are inseparably connected with one another, and conclusions reached in one field must be interpreted in the light of their bearing in other fields. The trend further indicates that, if human life and human character are to be understood, influences operative before birth must be studied with the realization that prenatal conditions affect the rate of development after birth.

In the postnatal stages the effects of light, season, diet, clothing, and comparable factors on the child are all under scrutiny. Indices of growth are being formulated through anthropometric studies, growth curves are being worked out, and the causes of de-

viations from what appears to be normal are being sought. The significance of certain measurements and the relation of these measurements to each other, together with the methods of making measurements, are under investigation. Posture is receiving much attention. Research workers are looking for some measures of normal development, activity, and variation among young children by which children may be compared.

Many phases of the anatomy and physiology of the growing child are being studied in different parts of the country. The development of carpal centers as one sign of the rate of growth is receiving marked consideration. The X-ray studies of children and the experimental work with animals now under way will, no doubt, add important links to this chain of knowledge. Correlated studies of dentition and of the development of head bones are being made and viewed in their relation to diet. The digestive tract, the heart and circulation, and, to a greater extent, the endocrines, are being studied in their relation to growth.

Although the research work in nutrition is being done largely with animals, these investigations throw light on safe procedures with children. The effect of the mother's diet on the welfare of the young, both before birth and during the nursing period, is being studied from a number of angles, with human subjects. Where preschool children are available for observation, appetite, eating habits, food requirements, mental development in relation to nutritional state, and the actual food intake of apparently normal children are all under examination. Carefully controlled experiments on the metabolism of protein, fats, calcium, phosphorus, and iron are being conducted. The enthusiasm over problems of irradiation is continuing with studies of irradiated foods, sunlight, clothing, and ultra-violet lamp irradiation. Research on the isolation of vitamins is being furthered.

VI. Tests and Methods for Measuring Growth and Development, and Their Interpretation

Dr. Arnold Gesell in an address before the American Child Health Association in May, 1926, stated the purpose of standards in growth studies in these words: "The scientific and the practical function of the standard in child health work is measurement, not compression into a mould. The standard is a formula which

represents a bit of information which may be used as a landmark of reference. We use the height and weight chart not to standardize physical growth, but to interpret it. Standards are the lenses through which we observe the child's growth to determine whether that growth is pursuing a favorable course. If we do not use clear, sharp-cutting lenses, we cannot catch our problems early or make our treatment timely."

Studies of physical growth and development fall into three main groups: (1) medical, clinical, or physical examinations; (2) clinical laboratory, microscopic, and chemical examinations; and (3) anthropometric measurements.

1. Physical Examinations

An adequate physical examination of the children under observation has not always been included in studies of physical growth and development. In the interest of the individual child a general physical study is desirable, and even necessary for protection, but for research purposes a complete examination is essential to the correct interpretation of results. The number of children having defects of various sorts makes physical examination imperative in order to rule out children or conditions which are outside the scope of the particular study.

Physical examinations should be made by those with proper medical training and experience, as the technique of physical examination is largely confined to medical practice. Besides this, the physician making examinations of preschool children should be equipped by personality, training, and experience to pass judgment on the physical state of children. All licensed physicians cannot do this equally well, for certain conditions in young children are as foreign to the thinking of many physicians and surgeons as they are to persons in less closely related sciences.

It is not our purpose here to discuss in detail the technique of a physical examination. Such discussion may be found in standard pediatric textbooks—for example, Levinson's *Examination of Children.*[9]

The physical examination, to be adequate, must be made with the child completely undressed. It should include a study of the

[9] Levinson, A. *Examination of Children by Clinical and Laboratory Methods.* St. Louis: C. V. Mosby Co.

child's posture, including feet and legs; examination of skin, hair, and scalp condition; examination of eyes for acuity and for defects; of nose for obstruction and evidence of infection in or about the nose; of mouth for cleanliness, eruption or loss of teeth, caries, shape of dental arch, and character of occlusion; of throat for amount and character of adenoid tissue (including tonsils); of ears for obstruction of canals and for condition of ear drums; of superficial lymph nodes; of shape and character of the chest (thoracic cage); of heart and lungs for evidence of physiological capacity and defect or disease; of abdomen for evidences of adequacy of the digestive system and for abnormal masses or tumors; of genitals for development and defect or disease; of body generally, for adequacy of bony development or defect, muscular development and symmetry, nutritional state, muscular ability or coördination; and of reflexes.

Children in different nutritional states probably vary in the rapidity and character of their growth. Postural defects frequently result from poor nutrition, although there are other causes of poor posture. These postural defects, including flat feet and other foot and body defects, are not found unless the clothing is removed.

The condition of the skin, hair, and scalp is modified by changes in the activity of the glands of internal secretion, especially thyroid function. These are less common in preschool children than in children of school age, but are not rare.

Defects of visual acuity and diseased or traumatic conditions of the eyes are likely to affect the child physically as well as mentally and socially. Bloch and others have shown that vitamin A deficiency in the diet is the cause of certain eye defects. Cases of postural peculiarities or defects due to eye defects are seen.

Abundant evidence is at hand to indicate the importance of focal infections, in relation to growth and development. In the northeastern United States, the most frequent location of focal infection is in or about the nose and throat (possibly with the exception of the teeth). Abnormal adenoid vegetations, middle ear infection, and mastoid infection are very common in preschool children. Acute tonsillar infection is less common in children under school age.

Examination of the mouth and throat for cleanliness, eruption or loss of teeth, dental caries, character of the dental arch, and character of the occlusion will tell much about the bone-formation processes which are going on elsewhere and the general nutritional state. The importance of dental infection in relation to growth and development is great. It is frequently considered a cause of malnutrition, but it usually is evidence of poor utilization of certain food materials or starvation for those materials.

Tests of hearing reveal defective hearing in about 2 percent of first-grade children. This is nearly always due to previous ear infection. If examination of the ear drums is added to the hearing tests, a larger number who have had infections will be found. The possible results of infection of the ear are the same as for other focal infections in addition to partial or complete deafness.

Examination of the lymph nodes or glands in the neck, under the arms, at the elbows, and in the groins gives evidence of infection in the body.

Adequate chest capacity suggests the possibility of development of a strong, robust body, whereas a poorly developed framework seems to limit the possibilities of development. The condition of the muscles, fat, and skin of the chest is likely to be the result of past factors, and to a lesser extent an index of future possibilities of growth. The size and shape of the chests of preschool children in relation to other parts of their bodies and in relation to their future physical welfare, efficiency, and longevity have not been studied.

Examination of the heart and lungs for disease is definitely indicated in physical studies of children. Disease of the heart and lungs (including the tracheo-bronchial glands and mediastinal structures) would exclude from studies of normal children at least 3 percent of the children considered.

The abdomen should be examined for evidence of disease, either inflammatory (as appendicitis) or tumor.

The genitals of young children give little evidence of development except in the few cases where development is pathological. Children should not be brought together without previous examination of the genitals for signs of infection.

A study of the reflexes for evidence of gross fault should be a part of a physical examination of young children, but a more ex-

tensive study should reveal much regarding child development. A study of functional development should include detailed records of reflexes and reactions.

Anatomical development of muscle tissues is considered in a physical examination, but a detailed record is not usually made. Anatomical and functional muscular development (muscle coördination) is a proper subject for research in physical growth and development and should bring to light valuable data.

Temperature, pulse, and respiratory rate are part of an adequate examination. They are valuable for detecting sick children, but up to the present they have not been used as standards of growth. Blood pressure is less commonly studied in children. We have figures which are supposed to represent mean blood pressures of children at various ages, but except in extreme cases we have no information regarding the importance of variations from the mean.

2. Laboratory Examinations

Tests of various kinds should properly be included in physical examinations. Some of these, such as Schick tests, Dick tests, tuberculin tests, and, in selected cases, various protein tests, are not properly laboratory tests. Though they are not so obviously linked with physical growth and development as are the foregoing parts of the examination suggested, they are distinctly related. Undoubtedly communicable diseases affect growth, and a study of susceptibility and prevention will have favorable results. Feeding unsuitable proteins to sensitized persons will also interfere with their optimal growth.

Physical examinations can be practically unlimited in detail, and likewise the laboratory procedures may be almost uncountable. In the usual physical examination, at least a blood count and urinalysis are advisable. Blood counts will reveal such things as anemias and definite evidence of infection.

Urinalyses are usually made only to find gross changes in the urinary tract. These are all that can be determined unless the urinary physiology is studied in conjunction with closely controlled metabolic studies. Both urine and blood offer opportunities for studies of developmental changes, provided they are closely associated with other physiological studies.

The Wasserman test or other tests for syphilis may be necessary as a routine in some groups where the disease is commonly present. In groups of good social standing it is not always necessary as a routine if skilled medical examination is available.

X-ray examination is a laboratory procedure frequently included in the physical examination. Usually its part is that of assisting in determining the presence or absence of disease. As a research technique it offers great possibilities for the study of bony changes and to some extent the developmental changes in the soft tissues of the body. Many studies have been carried on, but systematic studies with the X-ray are few. Rotch and Pryor working independently found that the epiphyses in various parts of the body appear on X-ray films at certain fairly regular times, and it has been stated by them, as well as by others, that the epiphyses unite with the shafts of the bones at quite definite times. Rotch and Pryor also found that the wrists were indicative of the process going on in other parts of the body, and they, independently, developed the order and the usual time of the appearance of the carpal bones and the epiphyses at the wrists. Pryor gave separate figures for boys and girls and showed that girls were regularly in advance of boys. Various workers have attempted to correlate the wrist development with other aspects of child development, but have had unfavorable results. Todd suggests that the finished outlines, rather than the first appearance of bones, be used as indicative of definite developmental accomplishments. A process beginning so early in life and showing regular changes, and which can be studied so easily, should, it seems, offer an excellent index of development. However, the proper technique and interpretation must be developed and their value proved. The correlation with other aspects of development should be determined. X-ray studies should be used much more commonly than at present in the study of child development. X-ray films at present, however, do not lend themselves well to anthropometric studies, since techniques have not been developed whereby accurate measures can be taken from films. For comparative purposes they are likely to be more successful. Landmarks can be shown with certainty and their locations determined with a fair degree of accuracy, but rarely accurately enough to make measures of size on the film.

3. Anthropometric Measurements

The anthropometric measurements which are the most valuable indices of growth and development are, perhaps, less clearly defined than the medical or laboratory tests. The endeavor of various scientific groups working on this phase of the subject has been: (1) to find those measurements which most significantly indicate the progress of the growth processes; (2) to discover what correlations can be made; (3) to interpret the measurements taken; and (4) to devise formulæ for finding the ideal weight for height and height for age.

Among the measurements generally made in laboratories are recumbent length, standing height, weight, stem length, sitting height, and chest and head circumference. Recent developments have emphasized the value of sitting height and chest circumference in the development of formulæ for obtaining ideal weight. The weight-height index and weight-to-chest-girth index have been receiving important consideration, as has also the endeavor to develop an "index of build" by dividing the weight in pounds by the cube of the height in inches and multiplying the quotient by 1000.

L. J. Roberts[10] says: "Various anthropometrists are of the opinion that sitting height or stem length is a better index of fundamental growth than is standing height and that it should supersede the latter in practical work. The principal defects in growth in badly nourished children they observe are in the lower extremities. Disease of the endocrine glands may affect the length of the legs, making them longer or shorter than normal, depending on the particular gland concerned; the bowlegs of rickets markedly shortens the height of the child, and less specific nutritional disturbances may alter appreciably the length of a child's legs and thereby his height."

Some investigators in this field have used the arm span, which Porter found approximates within 1 percent of the standing height. Baldwin concludes in his most recent work that although in general the curve for sitting height is similar to the curve of height, sitting height is a more satisfactory standard of growth than the usual standing height. In general, the purpose of the procedures in the

[10] Roberts, L. J. *Nutrition Work with Children.* Chicago: University of Chicago Press, p. 43.

various physical-growth laboratories is to obtain consecutive measurements of physically healthy children during the preschool years to establish averages for certain growth levels; to find ranges within these levels; to determine variations due to sex; to determine the rate of growth and the possible influence of season of the year upon it; to compute indices of growth and development; and to evaluate factors inducing variability in physical measurements, such as hour of the day, attitude toward laboratory procedure, activity previous to coming to laboratory, food intake, and elimination. The intercorrelation of these body measurements and their significance in interpreting the growth and development of the child are important, but not more so than the use of data in correlating the physical growth with the mental, social, and emotional growth of the child.

To eliminate or reduce errors in measurement, in some laboratories three or more trained persons make each measurement and a recorder makes the reading without their knowledge of the result. In others, one person makes the same measurement a specified number of times and the recorder averages the results of all the readings. In still others, two or three persons take the measurements and do their own recording without knowledge of one another's results. Later, these are compared and the procedure is continued until satisfactory agreement is reached.

4. Interpretation of Anthropometric Measurements

Just what these measurements can be taken to mean has not as yet been determined absolutely. Questions arise as to which outward measurable dimensions indicate that growth processes within the body are going on normally. What is the best index of actual increase in bone length and composition? What is the best index that the body is forming various tissues, glandular, muscular, and nervous, at a satisfactory rate? Are there measurements which indicate the presence and the proper functioning of the body secretions? Do the relations of certain body measurements to one another give evidence of the kind of growth progress being made?

Investigators are not agreed upon the interpretation of height or even on the ways of measuring it. Differences in height at the same age-levels may be attributed to differences in build, range in the growth processes, or to accelerated, normal, or retarded rate of

growth. For example, if within various groups at the third-year level are found children of different builds whose heights are 36.8 inches, 37.8 inches, and 38.8 inches, which shall be considered the criterion for judging children of that age?

It is often seen in groups of preschool children that some are at one time as much as two inches below the average standing height for their age-level, yet later their rate of gain in height may be speeded up so that they catch up with the age average. Sometimes this may be accomplished in a few months, sometimes in a year. This raises the question whether there are growth periods which are irrespective of time; whether children grow at certain rhythms which change from time to time; whether there are plateaus or levels of physiological growth which are reached by different children at different chronological age-levels. Such plateaus may possibly be measured by the relations of the body parts to one another. Some investigators consider that the ratio of body length to sitting height expresses this growth level.

The variations in height at the same age level are further complicated by the variations in weight at each height level. Whether this is a matter of different build or a result of greater metabolic efficiency is yet to be determined. Further study also is needed before the criterion for finding group standards can be set up.

Weight has been interpreted as a balance of the processes involved in digestion, metabolism, and cell utilization of food, with the internal secretions. Weight is also affected by food-intake, bodily activity, daytime rest, night sleep, and body elimination. It may represent an actual storage of body tissue or it may be an index of the balance established by nature when the body processes are proceeding properly. The causes of fluctuations in body weight and the comparative importance of the cumulative result over a considerable period and of the monthly increase are not yet fully understood.

Weight-height ratios, which are in fairly common use at present, may not be the most satisfactory means of implying the state of physical well-being. Baldwin[11] indicates that either weight divided by height or weight divided by the cube of height may be used in interpreting growth. Many workers in this field favor

[11] Baldwin, B. T. *Physical Growth of Children from Birth to Maturity.* Iowa Studies in Child Welfare. University of Iowa. p. 27.

the use of weight divided by the cube of the height. Their theory is that height measures only a line, whereas the cube of height indicates a volume which is more comparable with the bulk measured by weight. Children in perfect health would, according to this theory, maintain a definite ratio, and a marked deviation from that ratio would indicate a condition demanding the diagnosis of a physician for malnutrition or the interruption of some normal body process.

Some investigators emphasize the relation of stem length to chest circumference as a more indicative ratio; others stress the relation of stem length to stature.

The results of all these tests and methods for measuring the physical growth status will, of course, have different interpretations according to the background and training of the examiners. However, the conclusions from the physical examination, based as they are on the observations and investigations of the long-established science of medicine, are probably subject to less controversy than those based on indices of growth computed from a comparatively few anthropometrical measurements. The relatively recent beginning of the intensive study of normal persons by measurements of the body obviously means a smaller accumulation of data upon which conclusions can be based; therefore, physical examinations, as stated before, are highly desirable as a part of a study of physical growth.

VII. The Present Status of Research in Physical Growth

Research in physical growth is in a transitional state at present, swinging from the consideration of growth in terms of absence of disease to studies of normal individuals for signs of positive health. Physical and laboratory findings previously used for diagnosis and treatment of disease are now being modified to suit the needs of studies of normal growth. In addition, new methods of determining growth and health status are being sought, and a new nomenclature is being developed to express normality in positive terms.

The importance of prenatal care is commonly appreciated, but our knowledge of the anatomy and physiology of pregnancy and its effect on the child after birth is still meager.

The development and functioning of various parts of the body have had considerable attention, but too few studies have been made correlating this growth with diet, sunlight and artificial irradiation,

environmental conditions, and the social, mental, and emotional life of the child as a whole.

Already much has been learned about the dental apparatus, but further work is desirable to show what is normal dentition, how caries and abnormal dental development may be prevented, and in what way the teeth are affected by the general growth processes.

In studying anatomic variations within the normal range and the significance of such variations, the methods now employed are anthropometry on the living and dead, and clinical examination. Formulæ to express the rate of growth of body parts derived from post-mortem measurements have been developed to some extent, but they need to be done with greater completeness to establish their adaptability to living subjects.

Anthropometric methods for measuring growth have shown interesting advances. The height-weight-age relationship has been used most extensively as an index of growth, but certain discrepancies in its application have increased the interest in finding another more accurate index. The use of stem length in place of height, the use of chest girth as a significant factor in measuring growth, and the relation of lineal measurements to surface and volumetric measurements, are challenging the interest of many laboratories.

The present status of our nutritional knowledge as it concerns the growth of the preschool child is perhaps best summed up in a series of studies which have made a distinct contribution to our knowledge of what foods, and how much of each, American children eat. These studies of Holt and Fales,[12] McKay,[13] and Goodhue[14] were all made by recording the food-intake of groups of normal children after adequate medical examination of the children.

The results of these studies and those of other investigators are formulated in a table by McKay which indicates the comparative agreement of their findings.

Such studies as these offer satisfactory bases for determining the

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[12] Holt and Fales. "Food requirements of children." *Amer. Jour. Dis. Ch.*, 21: 1921. "Protein requirement." *Ibid.*, 22: 1921. "Fat requirement." *Ibid.*, 23: 1922. "Carbohydrate requirement." *Ibid.*, 24: 1922.

[13] McKay, Hughina. "Phosphorus intake of preschool children as shown by dietary study made by individual method." Ohio Experiment Station Bulletin 400. Wooster, Ohio.

[14] Goodhue, A. L. "A study of healthy children from 2 to 6 years by individual method." (Unpublished thesis, University of Chicago.)

amounts of food nutrients to be regarded as adequate for young children.

The necessity of vitamins in adequate quantity is so much an accepted fact, owing to the animal investigation which has been done, that it hardly calls for anything more than mention.

VIII. Needed Research in the Field of Physical Growth

Even in the light of the vast amount of research that has been done, Sir James MacKenzie says: "There is not a single sensation which man is capable of experiencing that has been thoroughly investigated."[15]

Probably the greatest immediate need is to integrate the physical, mental, social, and emotional aspects of the child's life in the light of our present knowledge and to plan coördinated research in related fields rather than to correlate it after it is completed. The specialist tends to see the child in terms of the investigations in his highly specialized field, rather than in the light of the integrated findings in many fields.

Combined studies of the child as a whole organism, the periods of development, character of responses, and favorable conditions for growth, should be undertaken jointly by medical, psychological, and physical-growth laboratories.

Increased emphasis should be placed on biochemical and physiological methods for studying the changes incident to growth and methods of testing which will indicate the changing conditions of the individual. The real significance of changes in blood pressure, temperature, pulse, and rate and character of respiration in normal children, has not been learned, because they have been studied largely as they are incident to excitement, fever, and disease. Investigations to determine averages of pulse, respiration, etc., for normal children and factors inducing variation from these standards are needed.

The relation of the physiological and anatomical changes taking place in the preschool years to those of the adolescent period should receive thoughtful study, as should the relation of nutritional disturbance and disease in the young child to conditions found in the adolescent. These studies should be paralleled with correlated investigations in psychological and social behavior.

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[15] *Oxford Medicine,* Vol. I, p. 17 (Oxford Press).

With the gradual accumulation of physiological data on normal children, standards of normal growth may be developed. Pathological work has not been considered here because of limited space, but further study of the effects of disease, past or present, upon growth and developmental processes is needed. The effects of light and radiation on growth call for considerably more investigation. The direct effect of radiations on growth is not sufficiently understood, and the study of radiation in relation to disease, and thereby indirectly to growth, is in a very early stage of development.

Among the recognized factors affecting the rate of physical growth are hours of sleep, habits of elimination, amount and character of the food-intake, amount of fluid-intake, and degree and kind of physical activity. All these factors are important, but more so when integrated with behavior attitudes, fatigue reactions, stability of child personality, and changes in mental development.

Much of the information now available through the literature consists of opinions based on clinical observations of ill children. The character of sleep may have a much more profound influence than is now recognized, and careful studies made from reliable records of normal children may determine the character and amount necessary to promote growth. The influence of elimination on growth will only be determined satisfactorily when comprehensive studies covering adequate periods of time have been made and the results interpreted, probably with the aid of bacteriological and chemical laboratories. The fact that water is now recognized as regulating body temperature, and as functioning in rendering food utilizable by the cells and in removing cell waste, makes the amount of fluid-intake a factor deserving of further experiment to determine the amount to be taken and the most desirable intervals for it.

The amount and character of the food-intake demands further study before standards can be established with a degree of accuracy which is desirable. Animal experimentation has shown the results of deficient diets, but applications of the information so obtained to preschool children have not been so numerous or so definite. Research on children has been confined largely to observations of the intake of protein, fat, and carbohydrate, although just as exact data on mineral and vitamin intake are necessary to make a significant interpretation of the adequacy of the food supplied. Also

many of the data relative to food-intake have been concerned with the energy requirement for families, and the problem has not been approached through the more valuable individual method of study.

Adequate research in the basal metabolism of young children and complete metabolism experiments in food-intake and elimination should be made, not only to determine the total energy demand of the body, but also to furnish a sound scientific background for practices in giving foods. These should be planned to include a determination of the calcium and phosphorus retention, the iron requirement, and the nitrogen balance. In connection with the metabolism experiments, systematic observations and accurate records should be kept to furnish information regarding the kind and duration of indoor and outdoor activity of young children.

Posture is being used as one of the indices of general physical development and nutrition, yet the basis of judging posture has been to a great extent the personal opinion of the examiner. Research must be forthcoming to find the best methods of recording posture, of establishing standards of healthful postures for children, and of measuring and interpreting deviations from such standards. The relation of improvement in nutritional condition to improvement in posture, and of nutrition to food defects, are also awaiting careful investigation.

One of the greatest needs in the field of child development is uniform terminology so that investigators in various laboratories may, when work is completed, have comparable results.

CHAPTER VII[1]

CHILD ACTIVITIES LEADING TO THE ESTABLISHMENT OF ROUTINE HABITS

The building up of routine habits is a basic function of education, none the less important because it has been comparatively unrecognized as a responsibility of education until recently. "Learning" includes more than mastery over the printed symbol; it is synonymous with habit and attitude formation in physical and mental health, and in the total personality development.

I. Principles of Habit-Formation

The child's habits are closely related. When he succeeds or fails in one, his attitude toward the others is affected. Certain principles are applicable to habit development in various fields.

From dependence to independence is a long and gradual process; the latter is probably never fully attained by any adult. The task of the educator is not easy, as he tries on the one hand to avoid building up in the child too great a dependence, and on the other hand to avoid putting him into situations which he has not the experience to meet. The child enjoys the activities in self-assistance where he understands clearly the process and is interested in the purpose. Care must be taken, however, that the habits he is expected to learn are suited to his stage of physiological and social development and that they are more related to his immediate stage of growth than to a later period.

In adopting methods of gaining satisfaction the child uses those which he has found from experience to be successful. It is therefore the course of the adult to plan the outcome in such a way that

[1] Acknowledgment is made of the kindness of Ernest Horn, State University of Iowa, in giving constructive criticism and advice during the preparation of the section on Methods of Educating Preschool Children (Chapters VII to XIII).

Acknowledgment is also made of the work of Grace M. Harris, the Park School, Brookline, Mass., for critical reading of the section while in manuscript, and for her many valuable suggestions.

Amy L. Daniels, Iowa Child Welfare Research Station, has helpfully criticized the portion of the present chapter dealing with nutrition.

satisfaction results when the child uses those methods which are desirable.

Indecision is painful. There are many activities which, if not relegated to routine, become matters of uncertainty and consequent friction. The child in the beginning acquires many habits through interest and repetition. Once they are learned, however, it is well that his attention and judgment be freed for some other interest. Time for eating, eliminating, resting, dressing, and other matters of routine may be established as part of the regular order of the home; when considered as such, much of the unnecessary emotional strain and conflict may be avoided.

On the other hand, too rigid a schedule is not desirable. The ability to adapt to new situations is important, and sometimes a few minutes' delay in the schedule may give the child opportunity to complete some undertaking in which he is vitally interested.

II. Aiding the Child in Habit Development

While habit development is a complex process, and attitudes are based on general principles, some phases are here presented separately.

1. Nutrition

There are two aspects to nutrition, the physiological and the psychological.

Researches into the physical elements of food, its digestion and metabolism, are included in Part II, Chapter II. These studies indicate the large fund of information on nutrition now available for education. Discussions of the educational significance of these are found in such books as Holt (9)[2], Lucas (15), McCollum and Simmonds (17), Roberts (24), Rose (25), and many others.

However, with the acquisition of knowledge of the optimal diet for children, there must be related knowledge of the important psychological facts involved in appetite. Without appreciation of the latter, enthusiasm for the former may do more harm than good.

Hunger is the starting point for eating, but as Aldrich (1) indicates, the actual hunger pangs are appeased by the first mouthful and it is the child's attitude which largely governs the amount

[2] Figures in parenthesis refer to the numbered references at the end of this chapter.

and kind of food he will eat. Appetite is in part a psychological problem, related to delicate and complex neurological reflexes. Being partly psychological, its presence or absence depends not only on the physiological condition of the child, but also on the educational treatment which the child receives. Assuming that the adult knows what the child should eat, which research studies indicate ways of cultivating his appetite for this food?

We may state frankly that comparatively little experimental study has been spent on how to encourage a keen appetite. The research that has been made, however, is of decided educational significance, suggesting methods which, if adopted, would modify to a marked degree much of the current practice in dealing with young children.

a. An Experimental Study of Children Given No Food Forcing. Aldrich (1) reports a study of 199 questionnaire replies regarding children from two to six years whose feeding he had supervised from the first few weeks of infancy until the time of the study. He found that approximately 85 percent were considered by the mother to eat satisfactorily (35.5 percent were eating hungrily; 49 percent were eating willingly). None had an aversion to food, and only 15 percent ate reluctantly. The average weight of the entire group was 3.6 pounds above average. None were appreciably underweight because of poor appetite alone, and all who were materially underweight with poor appetites were sufferers from definite chronic physical disease.

b. Building Up the Child's Tastes. In supervising these children Aldrich used the method of building upon the child's appetite and of doing away with attempts at forcing. He makes the following suggestions for the feeding of children who are physically normal.

(1) For the nursling. The occasional presentation of the bottle during the first month, in order that the child may accustom himself to the feel of the rubber nipple and the taste for artificial food before his appetite for breast milk exclusively is formed. "Since appetite is a memory complex, we would expect no child to have an appetite for the bottle who had never tasted it."[3]

In planning ahead for the weaning period, Aldrich suggests that cereal in gruel form be early included in the bottle formula. At

[3] Aldrich (1), p. 87.

from four to seven months a cereal should be given to the baby in a spoon. Only one or two spoonfuls should be offered in the first attempt, and the amount gradually increased.

(2) For the older infant. In adding vegetables to the diet, bringing in for the first time wide differences in taste, it is recommended that the child be given plenty of time to get used to each food before an attempt is made to introduce a new vegetable. Very small servings of each new food should be given over a long enough period (usually one or two weeks) before the baby is confronted with another change. A small child does not crave a wide variety in his diet. Aldrich then adds, "If he eats a good variety and simply will not be reconciled to one or two kinds, it is best to respect this whim of his appetite and erase them from his diet list."[4] For the adult to bring about an emotional conflict over one food may interfere with the normal functioning of the appetite reflexes, with possible harmful effects on eating in general.

c. Factors Involved in the Development of Good and Poor Appetite.

(1) Hygienic: Sleep, fresh air, and opportunity for outdoor play are related to the functioning of appetite. Johnson (13) found that preschool children living in the country received less urging to eat than city children. This might indicate the effect on the appetite of fresh air, sunshine, and space for activity. It is important that a condition of relaxation should immediately precede and follow the meal, as nervous irritability affects the desire for food and its assimilation. The conditions of the dining room may well be considered—chair and table of suitable size, in an attractive, well lighted, and ventilated room, may aid not only in establishing the child's comfort, but also in forming in his mind pleasant associations with eating.

(2) Dietetic: A proper balance of the different foods in the diet is important in the functioning of both hunger and appetite in the small child; therefore the food content must be considered.

Practically all writers urge regular hours for meals, with a longer interval between meals when a child shows signs of lack of appetite. Another point on which they are unanimous is that there should be no eating between meals for the child of poor eating habits, and perhaps the omission for a short time of the mid-

[4] Aldrich (1), p. 92.

morning or mid-afternoon lunch in the hope that this plan may develop a greater desire for food at the noon or evening meal.

It is the practice of many nursery schools, if they find that their children are already getting sufficient milk, to substitute orange or tomato juice for milk for the mid-morning lunch. Since these foods tend to increase the appetite, they are particularly valuable for the child.

(3) Physiological: It is natural for children in good health to have good appetites. Therefore when a child, contrary to his custom, shows a loss of appetite, it is well, instead of urging him to eat, to consider the possibility that his nature is protecting itself against overfatigue or the onset of illness, and that a cutting down of the amount of an occasional meal is not likely to harm him. In a case of true anorexia one of the first steps is to consult a physician. However, in view of the fact that by a change of attitude on the parents' part good appetite can be frequently established, most authorities agree that the problem is at least in part a psychological, as well as a physiological matter.

(4) Psychological: It is possible that the success attending infant and child welfare work in recent years has been responsible, through the intense interest aroused, for an oversolicitous attitude on the part of mothers, as well as for a certain loss of judgment on their part. In many homes the meal time for the children is one of family war.

Thom (29) says that one reason parents get so concerned over their children's eating is that poor appetite has come to be associated with poor health and that in the attempts to standardize weight and height many people have forgotten that all children do not require the same amount of food. It is well known that children vary widely in their ability to assimilate nourishment as well as in their ability to utilize food after assimilation, and yet we demand that all children consume the same amount of food. The natural build of the child has been ignored in the physical examinations where his height and weight are compared with tables showing average height and weight for age and this comparison does not tell us his attainment as compared with his own possibilities. The ideal of the development of a stable nervous system has been frequently neglected in the desire to build him up to par physically. In fact the worried mother whose child is not eating as much as she thinks he should, unwittingly, by her attitude, puts an added strain on her child's nervous system.

Children have a natural desire for attention. Often a child refuses to eat or pretends not to like a certain food merely because by so doing he becomes the center of attention. As long as his parents fail to realize that he may be using food refusal as a threat over them, just so long will he continue to gain satisfaction in that way.

If most feeding problems in children are largely management problems, then we must look to the parent for at least a part of the cause. Practically all the literature cites the parents as vital factors. Huenekins says that "the emotional side of the child at this age, which marks the transition from the dependency of infancy to the quasi-independency of preschool life, is of more importance than the purely physical" and that the chief cause of emotional disturbance "lies in the child's environment, which in this age of preschool life is created almost entirely by the parents."[5]

The solution may lie in a further acquaintance of the parent with child psychology and an understanding of children. Common sense, appreciation of the child's mental powers, and the objective attitude are important.

All writers urge the cultivation of a detached, unconcerned attitude toward the child's eating. In a preliminary observation on lack of appetite of young children, in one preschool group, the method was tried of refraining from all attempts to urge the children to eat their dinner. An unconcerned attitude was adopted by the adult, but friendly conversation, pertaining to subjects other than food, was maintained. The food, if not eaten, was removed after thirty-five minutes, with no comment. The results suggest that urging is of little or no value in meeting the problem, and that children may quickly assume a feeling of responsibility for their own eating.

A parent's attitude toward food, even though not expressed in words, is readily communicated. The child notices his parents' comments about food and imitates them.

Children can be taught to like most foods without arousing antagonism if they are encouraged to try just a taste now and then.

(5) Management: Most of the factors of management also depend upon the parents. Lack of firmness and consistency are mentioned by both psychologists and pediatricians as important factors.

[5] Huenekins (11), p. 481.

While one or two writers have suggested that a child should be given his food and be required to sit at the table until he finishes it, some of them, as Thom (29) and Aldrich (1), strongly urge that the time of the meal be limited. They both suggest that 30 minutes is sufficient time for the child to eat without hurrying. They recommend that the food be removed at the end of a stated time, with no apparent concern, and no comment. It is well for the parent to see, in case the child omits most of a meal in this way, that within the next few hours he has a small amount of orange juice or other food containing the appetite-inducing vitamin, so-called. The purpose of this is not to satisfy his hunger, which should be kept for his next main meal, but to aid in increasing his appetite.

If the child is dealt with firmly one day and allowed to do as he pleases the next, the probabilities are that he will take a chance, hoping mother is in a lenient mood at the time.

That the meal should be a happy time seems to need no argument, yet the fact that it is mentioned so often by different authorities, such as Reid (20) and Frash (7), indicates that the happiness sometimes fails of realization. It is not difficult to avoid emotional upsets before or during a meal; yet all too often the conflict over meals is a serious obstacle to pleasant family relationships.

Forced feeding where a child refuses food is tabood by Reid (20), Roberts (24), and others. They agree that until one can find the cause of the idiosyncracy it is safer to ignore any refusal to eat and thus avoid an unpleasant scene and any unpleasant associations in the child's mind with that of food. "The psychic harm done as a result of conflict over meals far outweighs in importance any possible physical gain which could be made."[6] This does not mean, however, that the adult is not making every effort to see that the child is developing a liking for a wide variety of food. But a general attitude of firmness, rather than a conflict to the end over one food, is more effective. One suggested plan is to serve the refused food again and again, making no comments, and often the child will of his own accord slyly taste it and eventually learn to like it. A matter-of-fact assumption that everyone eats his meals is effective. Those who have had the most experience with young children advise against bribes to eat, in the nature of an extra story or a penny for the bank if a disliked vegetable is eaten. They

[6] Aldrich (1), p. 85.

consider that the playing of games to get children to eat is not advisable.

Table manners are often the subject of discipline at meal time and the atmosphere of the meal is affected. During early childhood the establishment of good appetite is the most important function of the meal-time, and it is not wise to educate for table manners (which can be acquired later) at the expense of appetite.

The most important psychological factors to be observed, then, in the cultivation of a child's appetite may be considered the following:

1. Making the meal hours happy and free from any emotional strain.
2. Overlooking trivial faults and avoiding haggling over table manners which can be learned later.
3. Adopting an attitude of indifference and unconcern toward the child's eating.
4. Being firm and consistent in the treatment of the child.
5. Refraining from talking too much about food.
6. Giving him approval when he does eat willingly and quickly.

d. The Child's Ability to Help Himself in Eating. Undoubtedly, it is an advance for the child to be able to feed himself as soon as he is able; to do so helps establish self-reliance and removes some of the personal or emotional element which may be present when an adult feeds him. On the other hand, habits of self-assistance which may fatigue him or divert him from eating are not recommended. For this reason it may be well to prolong for the two-year-old the period of using a spoon instead of a fork and to serve soup in a cup. If the child is to feed himself, everything possible needs to be done to facilitate the steps involved.

Aids to his eating are a comfortable low chair, so that he can put his feet on the floor, a low table which permits his elbows to be at the proper angle, table silver with handles long enough to be easily grasped, and attractive dishes.

e. The Need for Further Research. The cause and prevention of food dislikes, the effect of pleasant associations upon poor appetite, the relation of appetite to fatigue, exercise, and attitude, are among the problems on which research is needed by those responsible for the child's education. Study in this important field will aid materially in the development of wise methods of guidance.

2. Sleep

Although there is no general agreement[7] regarding the amount of sleep required by children at different ages, it is conceded by all that lack of enough sleep results in emotional disturbances, lowered nutrition, and less mental endurance. A pertinent problem is the means of developing good sleeping habits. The child is apt to resent being sent to bed unless he goes to sleep quickly; enforced inactivity is irritating to most healthy individuals.

a. Causes of Poor Sleep Habits.

(1) Discomfort. Anything which makes the child uncomfortable will keep him awake and ultimately induce sleeplessness. Hunger, poor digestion, pain, itching, or tight clothing are possible factors in the preventing of sleep.

(2) Emotional factors. Other factors tending to cause sleeplessness are fear, unwonted stimuli, muscular tension, pain, or emotional excitement. Cameron (34) accents fear, especially fear of not going to sleep. If a child's attention is directed toward the difficulty of not going to sleep readily, if the failure is looked upon as serious, he will continue to fail. An almost certain way of producing sleeplessness in a child is to urge him to sleep. If one makes light of the symptoms and tells him all he needs is rest, this difficulty is easily removed. Fear of anything disturbs the stream of consciousness and prevents sleep. Fear of the dark, of being left alone, of noises, or of imaginary ogres is often the unknown cause. Sometimes fear of enuresis will make a child afraid of sleep. Thom (29) indicates the fear experienced by many children that their parents may leave the house. He advises that the child never be deceived in this respect, but that the parents tell him honestly whenever it is necessary for them to leave the house after he has gone to bed.

Sometimes when it is difficult to find out the underlying cause of fearfulness, a different room, a soothing story, discussion about the dark as pleasant and friendly, or a flashlight at hand, will alleviate the situation. Some children may be led to enjoy being in the dark through the opportunity it affords for watching the stars.

(3) Physical activity. Another factor tending to dispel a desire for sleep in a child is excitement at bedtime, such as a romp

[7] See Bayley (32), Fleming (36), Gross (37), MacCarthy (16), Seham (44), Terman (46), and others.

with his father. Boisterous play may cause exciting stimuli to pour into the brain from every sense organ. It is not suggested that this romp be eliminated, because it is of great value in other ways and the resulting companionship may be as important as sleep, but that the activity be had before dinner, giving the meal time for the establishment of composure before bed.

(4) Unpleasant associations. Hatred of bed is often formed in the child's mind when he is sent to bed as a punishment. Many mothers who would not even consider corporal punishment do not hesitate to send an erring child to bed in disgrace. He is upset emotionally, resents the disapprobation, and feels that bed is an evil to be avoided. Instead of this, bed would better be kept for the purpose for which it was intended—sleep and rest. Similarly, allowing the child to cry himself to sleep in order to make him realize that the parent is master of the situation may engender a hatred of bed. It is important that pleasant associations be built up in connection with bed-time, and that the habit be not established of the child's crying himself to sleep at night.

(5) Desire to share in the family activities. Some children may feel unjustly treated by being sent to bed at the most interesting time of the day. If the family bury themselves in books or in quiet adult conversation, the child soon feels that the scene is uninteresting and has less desire to remain with them.

b. Theories of Sleep. In order to induce sleep easily, one should know what takes place before sleep ensues. There are many theories; Coriat (35) and Kleitman (41) present one of the most feasible theories, and the latter considers that his experimental evidence strengthens his hypothesis. Consciousness, these authors state, is maintained by afferent stimuli; when these are absent, sleep results. By far the greatest number of these incoming stimuli come from the muscles, joints, and proprioceptive fibers. Hence muscular relaxation, even without fatigue, is conducive to sleep, because it eliminates the greater part of the proprioceptive impulses. Moderate muscular fatigue favors a relaxation of the musculature and lowers the stream of these impulses. Severe muscular fatigue is painful, and pain, by increasing the afferent impulses, prevents sleep. If this theory is correct, then muscular relaxation and the general comfort of the body are the factors most conducive to sleep.

This theory, however, takes no note of the fact that worry, unhappiness, and undue excitement may be additional causes of sleeplessness, so that more than physical relaxation is necessary as a conditional elcment of sleep.

c. The Length of Sleep. There is a wide range in the amount of slcep recommended for young children, as the hours suggested as optimum or average in the studies mentioned will indicate.

Age	*Hours*	*Age*	*Hours*	*Age*	*Hours*
1-2	12-20	3-4	12-16	5-6	11-14
2-3	12-18	4-5	11-15		

However, before drawing conclusions concerning the number of hours a group of children are sleeping, one should know if the children are subject to colds, to poor appetitc, to lack of ambition, to emotional upset, to digestive disturbance or if they are underweight. The causc for all these may be insufficient rest. Says Aron:[8] "How many hours the child must sleep, what his sleep requirement for his age, weight, or size, is not known. His food intake, his activity, his intensity of growth, the climate, and time of year—in fact anything that influences his food requirement works indirectly on his sleep requirement . . . This knowledge is essential: that for many children the lengthening of sleep will do more than food, appetite-producing medicine, iron, or arsenic."

Bott, Blatz, *et al.* conclude as a result of their study that before the age of two the child may well be permitted to sleep as long as he will, for his habits of sleep in the daytime are one with his habits of sleep at night. However, between the third and fourth year of life, he should not be permitted to sleep more than about 1½ hours in the day time; a longer nap may interfere with his night sleep and deprive him of needed fresh air and play. "This conclusion is an endorsement of the routine sleeping practice followed in most nursery schools."[9]

d. Associating Other Sleep Stimuli with Fatigue. La Rue (42) suggests that since fatigue is nature's sleep producer the adult may try, when the child is fatigued, to build into the set for sleep other stimuli like darkness, cool fresh air, and silence in such a way that these may later produce sleep without the presence of fatigue.

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[8] Aron, H. "Über den Schlaf im Kindesalter." *Monatschr. f. Kinderheilkunde.* 26: 1923, 209-216 (p. 212-213). (Trans. by J. I. R.)

[9] Bott, Blatz, *et al.* (4), p. 35.

The establishment of such desirable conditions for sleep may be begun early in the child's life. He can soon learn to associate quiet, darkness, being alone, and being in bed with relaxation. Adults may well remember that if an elaborate conditioning, such as the mother's lying down with the child at bed-time or the presence of toys, is set up, whatever is started will have to be continued. A lullaby sung softly by the mother is ideal until some one else attempts to put the child to bed only to find that his efforts are futile.

e. Quiet. Whether quiet is essential to sleep is not known. Music may be conducive as it assures the child that someone is near, and may also have a relaxing effect; on the other hand, it may be an extra stimulation. It is agreed, however, that for a child accustomed to going to sleep to music, the household need not maintain great quiet during the rest of the evening. Thom (29), Blanton (3), and others believe that children early should be trained to sleep in a household of noises of various sorts. Blanton writes: "Those adults are happiest in the long run who, through necessity or wise training on the part of their parents, have been made to adapt themselves to sleeping in any surroundings."[10]

f. Hygienic Conditions. Hygienic conditions are also important. Although no experimental work on the subject is reported, it is believed that fresh air and outdoor play are the greatest sleep producers. The country child, outdoors most of the day, will often go to sleep in spite of himself at the dinner table. A child who finds it hard to relax does so more easily if his muscles are weary to a wholesome degree. Regularity of bed-time also is an important aspect of the readiness for sleep.

g. The Child's Attitude. The attitude on the part of the parent and child of expecting sleep can be cultivated. With the children at the St. George's School,[11] the fact that the other children were asleep was found to be "the chief suggestive means depended upon to cope with the wakeful child." Thom[12] writes: "The child should have the idea firmly fixed in his mind that the sleeping period is the time when he must be alone, that companionship and

[10] Blanton (3), pp. 73 ff.

[11] Bott, Blatz, Chant, and Bott (4), p. 26.

[12] Thom (29), p. 74.

distraction, such as books and games, are not compatible with sleep, and these things cannot be gained by wailing.''

Bott, Blatz, *et al.* find effective as positive measures for inducing sleep with the wakeful child in the nursery school: (1) the avoidance of all use of duress or force, eliminating even the suggestion of punishment or specific reward, and (2) positive suggestion from the adult who, sitting on the side of the cot, tells the child in a low tone of voice that he is going to sleep or places the hand lightly on the back or shoulder if the child is restless.

Burnham[13] writes: ''Especially is it important that children should be trained to make preparation for sleep. At the close of the day it is fitting that they should give up their more boisterous sports and occupations, sit quietly in the family circle, and rest from the more severe occupations of the day . . . Children should be trained to settle their moral accounts every night . . . and wipe the slate clean from all the worries and troubles of childhood . . . A wise and tactful mother can train her children . . . so that when they go to bed at night the mental attitude is serene, and attention, as well as muscular tone, is relaxed; . . . but if one goes to bed with anything special on the mind, then the condition is likely to be that of attentive sleep.'' Burnham adds that there should be no repression, artificial interference, postponement or curtailment of the sleep mechanism.

One of the best means of developing good sleep habits is to avoid overaccenting their importance as ends in themselves, but to arrange the day's activities so that sleep is the natural culmination.

h. Needed Research. There is need for further research into the sleep of young children. There is wanted experimental evidence and recommendations regarding the nature of sleep, the optimal amount, the conditions making for sound sleep, and methods of inducing it. With the present state of knowledge of sleep, almost more than in any other field of the young child's education, all methods should be considered tentative.

3. Elimination

Learning to control the bladder at an early age has an important relation to the comfort and self-reliance of the child as well as

[13] Burnham (33), pp. 26 f.

to the lightening of the mother's work. There is a wide variation in the abilities of children in this respect. Bott, Blatz, *et al.* (4), Gesell (49), Woolley (51), and others consider that by the age of two years most children can keep dry throughout the day and can be well started on the way to having dry nights. Woolley[14] writes: "When in the mother's judgment the child is old enough to learn, she ought to make up her mind to devote herself to this problem for a few weeks, perhaps for a month or two. She should find out what the natural rhythm of urination is, and then take the child to the toilet often enough so that he is dry most of the time. As soon as the rhythm and habit of using the toilet are fairly established, the mother may well aid the child to feel a responsibility for keeping himself dry. Success or failure is very intimately bound up with the kind of attitude the child himself establishes in his own mind toward this whole process of the use of the toilet." Bott, Blatz, *et al.* (4) warn against the advisability of trying to train for bladder control before the child's sensory discrimination has matured sufficiently for him to differentiate the essential features in the process.

As a result of study of the control habits of nursery-school children, they make the following educational recommendations: (1) avoidance of overemphasis of early acquisition or overtraining at any age; (2) avoidance of all disturbing emotional complications, such as shame, scolding, ridicule, anger, punishment (or elaborate reward); (3) employment of a training technique designed to assist the child directly with the essential points which are intrinsically difficult in the process, rather than one based on extraneous motivation; and (4) an attempt to develop at each stage that rhythm of control best adapted to the physiological and the social needs of the individual child. Woolley (51), Wickes (50), and others indicate, moreover, the relation that lack of control bears to an infantile dependence on the mother and suggest that this relationship often leads the child to maintain a passive attitude rather than to adopt an active desire for control.

Considering the fact that acquisition of bladder control plays a prominent part in the early deliberate learning of the child and is bound up with many other factors related (in ways we are now beginning to realize) to his physical and mental health, the need

[14] Woolley (51), pp. 40 f.

for further and extensive experimental data is felt keenly by educators.

4. Other Habits

a. Dressing. Besides the basic habits already discussed which the child acquires in his daily routine there are others, like dressing, which are part of his educational experience. There has been very little observational or controlled study of the motor coördinations involved in dressing or of the methods by which the child acquires these coördinations. One interesting experimental study in this field has been made by Wagoner and Armstrong (65) in the attempt to answer the question, "When has a child acquired such motor control that he is ready to learn to dress himself?" In studying 30 children between the age of two and six in actual dressing situations, the results indicate (1) that the ability to manipulate buttons may be a function of maturity as well as of learning, (2) that the interest of the older children as compared with the younger developed with the development of their increasing ability, (3) that unbuttoning was easier than buttoning, (4) that manipulation of the side fastenings of the jackets was much more difficult than of the front fastenings, and (5) that the waistline buttons on the side of the jackets were much more difficult to button and unbutton than the two lower buttons. The qualitative results give suggestions, also, for the more satisfactory sizes of buttons and their fastenings. Loops were found easier than buttonholes. The authors recommend "further search for a criterion of 'dressing-readiness' and further study of the type of fastening which is most easily manipulated by the child."[15]

With our present knowledge concerning the motor processes involved, it seems wise for the adult to be guided by the principle of flexibility. In so far as the child is able and interested he may gain satisfaction and self-reliance in aiding himself; to urge this to the extent to which the child might be fatigued is not wise. Neither is it wise to ask the child to spend a comparatively large amount of his time on dressing if this necessitates the exclusion of other values.

b. Walking. Walking is another basic phase of early education. Most writers emphasize the danger of encouraging the child

[15] Wagoner and Armstrong (65), p. 97.

to walk too early. Blanton (3) indicates the advantage of flooring in the playroom of thick, soft material, so that when the time comes the child will feel free to walk with freedom; and suggests that a grassy lawn is the best place to learn to walk. Gesell points out the child's need for suitable space for free and whole-hearted outdoor play. "The young child loves life and motion . . . He will build, climb, jump, run, and skip; he is versatile beyond all expression and needs only the suggestion of his environment . . . to supply him with the truest and happiest exercise of his whole body."[16]

In connection with walking, the adult needs to bear in mind the child's posture. Langnecker (57) and McGownd (58) point out the relation of suitable clothing to the development of the child's body, with especial attention to the underwaist and shoes. Langnecker, Hendrickson (56), and others point out the importance of suitable toys and play apparatus in the child's acquisition in habits related to posture.[17]

5. The Dangers of Interference[18]

One further phase of the child's habit-formation may be spoken of here. Sometimes in the desire to accelerate a child's development or to shape his nature to fit a conventional pattern, the adult attempts to tamper with mechanisms more delicate than he realizes. Interference with the neurological reflexes of eating, of sleeping, of elimination, may create widespread disturbance. Fears built into a child may inhibit development in several phases.

Interference may be especially disastrous in the adult's attempting to transfer the child's natural handedness. The neurological elements involved in the establishment of the preferred hand or eye are still obscure. That there is some connection between the speech control and hand control seems evident. To attempt to transfer the child from the use of the left hand, especially during the time when the speech associations are forming, may be fraught with grave danger. Not only may speech be affected, but mirror-writing and drawing may be induced, the ability to read definitely

[16] Gesell (55), p. 238.

[17] Further discussion of educational provisions for growth will be found under "Play" in Ch. X.

[18] This section has been written with the aid of L. E. Travis, State University of Iowa.

handicapped, and a certain amount of confusion result. Orton[19] writes: "I cannot express myself too strongly in saying that the attempt to make right-handed children of naturally left-handed ones is a dangerous proceeding and a fundamental physiologic error."

Not only do several researches[20] indicate the dangers of 'transferring' the left-handed child, but they also indicate further that adults should watch the infant closely to note any early manifestation of a native lead and encourage him systematically to establish this lead. Occasionally, parents who find a preference for the left hand in a child try to train the right hand as well, hoping to make the child equally skillful with both. This procedure is inadvisable. Studies indicate that the two hemispheres in the brain cannot function with equal efficiency. In order that the child may act and express himself directly, one hand should lead and the other act as support (without training). Delay (through interference by the adult) in establishing this native dominance may result in retardation in speech and in certain phases of mental development, and in confusion of the total personality.

III. The Child's Day at Home

1. The Influence of the Home Upon the Child's Development

Since the home is the basis for the development of the child's habits in physical and mental health, since the influences which surround him at home affect many of his fundamental and permanent trends in later development, attention is more and more being centered on the educational influences of the home.

In the home the child's early health habits are established. The relation of habits of eating and sleeping, of elimination, and of other activities have just been discussed. There are other habits formed in the home of equal importance, habits of thinking in regard to self and others, habits of approaching new interests and new situations. Alpert (52), in a recent study of problem-solving by preschool children, indicates the value of learning good habits of problem-solving in the early development of the child.

Many habits and attitudes are formed directly through the parents' teaching; others the child acquires through the unwitting

[19] Orton (59), p. 454.

[20] See Claiborne (53), Travis (62, 63), and Orton and Travis (60).

influence of those who surround him. When he leaves the home and enters school, he already has a definite personality, with trends of behavior whose patterns have been too deeply laid to be modified readily by later experiences.

Since the early years are those of the child's most rapid growth, the home is now more plainly seen to be a place where careful and systematic provision must be made not only during infancy but during the run-about years as well.

2. The Child as an Individual in the Home

One means of aiding the child to become self-reliant is to provide for him some room or corner in the home where he may keep his own things and where he can play in his own way. Not only does this aid in the tranquillity of the household, but it also helps the child to develop a sense of responsibility. For the same reason, some corner of the yard may well be considered the child's own. If there are other children in the family, it has been found that for each child to have individual rights aids in the interadjustments of the family.

3. The Atmosphere of the Home

The elements in a home which make for the child's happiness are by no means complete with provision for his physical welfare. While cleanliness, order, and material equipment may be indispensable assets, nothing is of more importance than the atmosphere of the home. The parents' attitudes of confidence toward the child and toward each other, the wholesomeness of their outlook upon life, the degree of their pleasure in caring for the child, are factors whose influence is certainly marked.

IV. The Child's Day in the Preschool Group

1. Adjustment to the Group

For some children the transition from home life to school presents a definite adjustment.

a. Anticipation of School Entrance. Parents who are planning to send their child to the preschool may well prepare by looking forward to it as a normal and happy experience for the child. The slightest apprehension about this adjustment is quickly com-

municated to the child, whether he hears the parents discussing it or merely reads it in their attitudes or faces.

For some weeks previous to his entrance to the school, seeds of interest can be planted easily in the child's mind. The toys and apparatus to be found there, the pleasure of having other children to play with, and the fun of starting out from home every morning with father can be subjects of conversation. An attitude of pleasant anticipation thus may be gradually built up.

Sometimes it is difficult for the parent to accomplish this, because of his almost unconscious pleasure in feeling the child's dependence upon him. A child who finds adjustment to school especially difficult is frequently one who has never been encouraged to stand alone at home. On the other hand, he may be a child who has frequently been deceived in his past efforts to adjust, and who has been put into several difficult situations which he was unprepared to meet.

b. Flexibility of School Arrangements. The school itself may meet the problem in a variety of ways. The child may be invited to come with its mother for a few mornings to play before the session opens, as Stevenson (61) suggests, or the school may arrange to have the children enter school in groups, perhaps six the first day, increasing the number attending on successive days.

Some teachers believe it is best for the parent to leave the child as soon as the nurse's inspection is over on the first day, thinking that the child will only cling and cry the harder as long as the parent stays, and will not adjust himself until the realization comes that the parent has left. Others believe that the clinging child should be allowed to make the transition more gradually, and they ask the parent to stay until the child knows and has confidence in his new environment and has entered into some of the new interests.

Sometimes it has been found advisable to have a shy child stay at school for only a short time at first, increasing the length of his stay daily until he feels at home there.

The teacher needs to discern whether a child who cries when his parent leaves is really homesick, or is merely angry because his mother is leaving when he has told her to stay. The latter situation usually clears up quickly, once the child finds that his storming

affects neither parent nor teacher; with the really lonely child, a careful study of how best to gain his confidence must be made.

For a dependent child finally to make this adjustment and thus broaden his resources is a signal and permanent achievement toward the development of his poise and social adaptability.

2. The Preschool Schedule

One of the most important principles on which to base the preschool schedule is that of flexibility. Except for the nurse's inspection, meals, and naps, which need to come at regular times, the rest of the time may well be adapted to meet the children's interests as they arise. For this reason many preschool groups are recommending that so far as possible the regular teachers carry on the educational activities, thus avoiding breaking up the play periods to get ready for special teachers at definite hours. Long periods for play, uninterrupted by adult or group demands, are needed by young children, whether they are of the nursery school or the kindergarten age.

When children are free to set their own times for activities and the length of the period spent on any one occupation, it is found that they are less apt to be fatigued. A schedule broken up into small periods, when the group is expected to act in unison and to follow the directions of adults, may result in fatigue, inattention, and sometimes in problems of behavior.

This element of the child's need for free play is important. A schedule based on consideration for his full growth and development is essential in a nursery-school program. The same principle of flexibility is becoming more and more the basis of modern kindergarten practice.

There is, however, a rhythm about play as in other forms of development. After a period of exercise the child undoubtedly will need a more quiet activity, after which in turn he will welcome exercise again.

Not only is it essential to have flexibility the basis of the schedule of the preschool group, but the basis of all the activities within the playroom or the playyard may well be the spontaneous interest of the children. Because young children are suggestible and in the main docile, adults occasionally fall into the habit of trying to teach them or to hold their attention too much. The function of

the teacher in the group rather would seem to be that of providing an environment rich in educational values, in supervising the children against any possible dangers, against domination of one child over another, or fatigue, with the rest of her activities following upon the initiative of the children.

Upon the understanding of the teacher of her place as helper rather than director depends the tranquillity of the group life. The child, being highly susceptible to the influences about him, is quick to catch any feeling of tension which adults may develop. One has only to observe varying groups of children at play to note the harmonious, yet purposeful, activities going on in some playrooms, compared with the more confused, strained atmospheres of others. Strain frequently results either because the adults have not planned in advance in an adequate way or because they are trying to do too much while the children are there. It is as necessary for the teacher as for the children to be at ease, to have herself entirely in hand, and to be able to enter into the life of the group without worry or tension.

Children may gain through preschool play many values—physical vigor, intellectual interests, emotional stability, and the ability to play and to share with others. These values will be discussed in the chapters which follow. It may be well here, however, to call attention to the fact that the basic aim of the child's day is the maintenance of his happiness. All the activities may be planned toward this end and the nursery school or kindergarten may be a center of happiness, a place where purposes are carried out with interest and remembered with pleasure. This pleasure may radiate to benefit the child's development in every aspect.

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CHAPTER VIII

CHILD ACTIVITIES: PLAY[1]

I. Values

While every aspect of the child's early life may be considered as related to his play, special attention is given here to the values, the activities, and the educational provisions for that form of play which manifests itself predominantly in physical activity and movement. Other forms of play are considered in subsequent chapters.

It is generally agreed that the normal biological development of the young child's organism is fundamental to his future success and happiness. But these functions are not merely 'vegetative,' as was once asserted, and it no longer seems the full truth to say that the chief business of the young child is to grow. All activity is not equally significant. One of the functions of the adult is the selection for the child of those activities fundamental in promoting growth and development. In the early years the play activities are primarily determined by the nature and needs of the child organism. Play may be said to be the manifestation of spontaneous, free, fully integrated activity of the child, so that in the nature of the case there can be no adequate substitute.

There are not many years when we can depend upon the motor impulse to be as incessantly active as it is in childhood, and it is clear that children gain all their ordinary techniques by means of it. Play also exhibits another quality, the tendency to seek for variety, to experiment. It sends a child first to testing out his powers, and then to attacking experimentally his entire environment.

These two essential characteristics of the play impulse, the tendency to be active and the tendency to be experimental, are assets of education.

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[1] This chapter is based largely upon material submitted by Harriet M. Johnson, Bureau of Educational Experiments, New York; supplemented by contributions from Charlotte G. Garrison, Teachers College, Columbia University, and George E. Johnson, Graduate School of Education, Harvard University. Eva Hulson, Iowa Child Welfare Research Station, has aided in the compilation of the manuscripts, and in the preparation of the references.

II. Play Materials and Equipment

1. Need for Materials

Tendencies are assets only as they are used. Children may be incessantly active and have the investigating qualities of magpies, yet show lack of integration in the motor impulses and a marked paucity in their play interests. For play, as for work, there needs to be a shop and raw materials. It is the function of the home and of schools for preschool children to supply them play space and equipment.

Interests will develop spontaneously out of play impulses when time and material are provided. It is important to assure time to the children and to plan an equipment based upon the child's needs.

2. Selection of Play Materials

In selecting play materials of all kinds for young children, it is necessary to consider the safety of the piece of material both in its workmanship and the possibilities of its use. It is necessary, for example, to ascertain whether it can be kept clean, if painted, and whether it is the kind of paint that will not be injurious if the child should touch the toy to his mouth. It is well also that the plaything chosen have artistic qualifications—at least that it does not go counter to artistic principles.

a. For Dramatization. We have implied that life in the preschool years is an actively sharing and experiencing one. Children will tend to reproduce and elaborate their experiences in their play. It is one of their means of organizing their observations about men and things and of reënforcing and vivifying their past experiences. They will adapt materials as they find them, but the adult needs to make definite provision for this type of dramatizing. Children will do it with no material at all, but if they are working with "properties" like boxes and boards and blocks, or dolls and wagons and clothes, their imagination will tend to add to the scheme and depart from the first simplified attempt.

b. For Creative Activities. There is furthermore an impulse to devise, to create, which must be met. At first almost anything which can be moved about will meet the desire. Blocks are especially well adapted to satisfy this early patterning impulse. Later, tools and wood can serve some children; clay and paints meet the needs and interests of others.

The essential thing to remember here is that in these activities the child is an artist, not a mechanic. The stirring experience comes to the child through the process of doing, not so much through the product which may be the more tangible result.

c. For Social Experiences. Play in the preschool years brings to the children very vital social experiences, those of meeting each other, of sharing toys, of adapting to varying personalities, and of entering into activities in which there is an increasing demand for coöperative effort.

The chief concern of adults should be to make sure that the social demands which the situation makes on the children are scaled to the appropriate age-level; that the age-range is kept fairly narrow or the amount of space large enough so that close-knit group play shall not be forced upon the children and social exploitation of the immature by the older shall be avoided.

It is less safe to allow the social impulse to shift for itself than to allow the impulse toward physical activity to do so.

3. Location as a Factor in the Selection of Materials and Equipment

The equipment which will serve these impulses need not be always the same, but should vary with the location of the playground. An urban situation will develop interests which will of necessity differ from those stimulated by the country or the suburbs, though both kinds of interests are based on the same impulses.

The nature of the country environment makes possible certain full-body activities for which definite apparatus must be provided in the city. In the large city, roofs provide far better outdoor space than yards because of the sun and freedom from damp. In the country it is possible to have ground enough so that gardens can be set aside without depriving children of adequate running space. Plants can be grown in country playgrounds and experience provided in learning to know and care for animals. In the country the processes which the children can observe are in simpler form than in the city. The intermediary step from the food a child eats, the house in which he lives, and the animals he sees about him to the source of these raw materials and processes is shorter and easier for him to follow and understand.

However, if the city is his environment, the problem of presenting this intermediary step to him when he is old enough to add acquaintance with a larger enviroment to that of the home and school must be met.

4. Basic Considerations in Selection

The preschool leaders who have blazed a trail have worked out their equipment gradually as they have seen needs arising in children's play. There have been published sample lists of apparatus, toys, and equipment which probably contain far more material than any one school or home needs in the beginning.[2] Very small children perhaps need more kinds of things than older ones, for they gain a certain maturity in perception by an extensive acquaintance with a variety of shapes, weights, textures, colors, and behaviors.

The essential materials are those that can serve the constructive interests. Blocks are always needed, in quantities, and should have a unit form that makes large and stable structures possible. Boards, boxes, ladders, and other such accessories to building are valuable.

Indoors it is important to keep in mind that the schemes of play that a child plans are aided if he has toys that are related to each other in size or in the suggestions they convey. If there are dolls that work into domestic play which reproduces his own home experiences, it may be well to have smaller ones which will combine with the trains or which can be used in the boats or houses he builds. Schemes of play are more likely than isolated or sporadic moments of play to give him the chance to review and relive what he has observed in the world about him.

Raw material is, however, what he needs. The furnished doll house gives much less lasting joy, as well as much less valuable experience, than the house built of blocks or fashioned from a packing box, if he has done the planning and the work himself. Most children who have been given the chance to deal with materials of this sort will prefer a simple set of wooden cars which they can run over tracks and on a turn table that they have made with blocks to a mechanical or electric set of trains and engines. With

[2] For a list of equipment used in certain nursery schools see Part 1, Ch. VIII.

this experience as a background they will bring more developed interests to their later play with the more elaborate electric toys.

Parents are beginning to do far more in systematic planning for the child's play than was formerly the case. Some communities have found[3] that small groups of fathers can erect, at a minimum of cost and a maximum of interest, sturdy play apparatus in the home or the kindergarten playyard. Simple materials of this type are: ladders, large strong packing boxes, bars for hanging and pulling, small elevations for jumping and climbing. Sand-box and swings are of course excellent, but it is also well to have some apparatus to meet the child's need for greater physical activity.

In the city play grounds, especially in the poorer districts where the very young children attend as well as the older ones, there is need of special provision for the small children. For them it is suggested that besides the traditional swing and slide, attention be given to many kinds of simple strong equipment for the exercise of arm muscles, leg muscles, for pulling, hanging, balancing, and other forms of activity which children are found to enjoy.

There is need of extended experimental study of the values of play materials for young children. Blackhurst (43) has studied the value of play apparatus for developing motor control in preschool children. She found that a group which had free daily access to such equipment as slide, large packing boxes, swings and trapezes, ladders, kiddy-kars, and indoor balcony (with ladder, suspension rings, hanging and stationary bars) made greater gains in motor control than groups of children not having such access. The study also led the author to consider that the larger packing boxes, combined with the ladders, planks, and smaller boxes, have great value to the child because of the wide variety of uses to which they may be put, and the many kinds of physical exercise which they suggest.

Farwell (45) has studied the reactions of young children to constructive play materials. She finds that "the Hill floor blocks, clay, water color, alabastine paint, and sewing materials are much more popular with children of this age than cardboard and paper construction and drawing." She also found that the choice of materials is affected, among other factors, by the newness of the material and by leadership. Hulson (48) has analyzed the choices and uses of play material made by four-year-old children. Eighteen

[3] Russell Sage Foundation (39).

types of play materials were ranked according to (a) the number of times chosen, (b) the number of minutes used, (c) persistence of material in child's interest, and (d) social value. It was found that blocks held first rank in all four; sand held second rank in all but social value; preoccupation in watching or observing the activities of others held third in all but social value; house corner held fourth under (a) and (b) above; and kiddy-kar held fifth rank in all but persistence. Of the various types of watching she found the largest percent of time was spent on observing the situation, before making a choice, whereas watching aimlessly occurred only five percent of the time. The value to the child of opportunity for spontaneous watching of those situations in his environment which interest him is a matter for increasing educational recognition.

There are other studies; but there are many possibilities in play material still unexplored. Further observation and experimentation may lessen the present danger of limiting the selection of play materials to more or less standardized forms.

III. The Conduct of the Adult in Guiding Activities

1. The Function of the Adult

The adult is an essential part of the preschool situation. The function of parents and preschool teacher is to see that the child learns to handle his own problems, to depend upon himself for managing his own body, his play materials, and his relationships with other children and adults. To keep in the background until there is a need for guidance is an essential of wise leadership. The adult should also make sure that success crowns the child's effort often enough to encourage a questioning attitude toward his environment leading to valuable habits of work and play.

2. Educational Aims

As the preschool environment is intentionally planned for the child's development, so the adult's program and procedure must keep his educational aims in mind. His reaction to children will take one form if he thinks that the more important value of toys is in accustoming a child to keeping the shelves of his toy closet in order, but a different form if he believes that play itself can be a dynamic process in the development of character and personality.

Putting toys away will then fall into its place as a means, but will not be the end itself.

The adult will watch the activities of the individual children to see if they are showing progress. Sheer activity engrosses babies, but we expect older preschool children to be able to be absorbed in an activity for longer periods and gradually to become more mature, not only in their actual performance, but also in their play content.

3. Resourcefulness

The adult needs to be resourceful enough so that she can stimulate the children to an awakened interest in the environment and their use of it when the need arises. This she may do in several ways: by a rearrangement of the materials; by introducing a dramatic element through a verbal suggestion; or by taking them for an experience outside the home or school environment when the children are at the upper preschool level. A chance to watch the working of a steam shovel or a trip on a ferry boat to see the river traffic is sometimes more effective as an educational method than the introduction of new and different play materials. They will go back to the familiar environment with a new play impulse and with wider interests.

4. Adapting to Children's Individual Differences

The farsighted adult thinks of children in groups as well as individually. The integrity of the group is important, but at the preschool age individual differences and needs must be met promptly and effectively. As far as possible the adult will deal with the children when playing together as group members, so that a personal difficulty will be solved where it occurs, yet at the same time each child's needs and stage of development will be considered.

5. Many Relationships

It is possible to indicate only thus briefly the place of the parent or teacher in the play of young children. It has been said that the child should be regarded as an artist. The teacher or parent is one no less and can be successful only as he regards himself as a student and observer, ready to correct his own procedure as his knowledge of the growing organism which we call a child brings to him a more fundamental understanding of child needs.

The adult is a protector and provider of proper conditions—not a director nor often even a leader. He is the balance of wisdom and power that restores harmony between the child and his environment when it is inadequate socially or materially. Occasionally, if he is conscious of the children's ability and need, he can add from time to time to the subject matter some slight element which would raise the standard of the game without expecting too much in organization from the immature.

Before six, states Johnson,[4] it is doubtful if anything in terms of educational objectives is gained by teaching children organized games. "We find that they frequently organize their own games, which are characterized by a very simple form or pattern. In playing them we note two outstanding qualities: first, they are rhythmic, another way of saying that they have a pattern; second, they make no demands on the individuals for real coöperation. The group acts in a sort of unison, but the game is not dependent upon the conformity of each individual." An example is then given:

> Five small chairs are set in a row. Five children go across the room, then race to the chairs. They seat themselves and tip forward and back, then kick rapidly, thumping the floor with their heels. Each child takes his own tempo, but the general effect is a fairly even rhythmic movement. Suddenly all stop and fall out of the chairs forward on their hands. Then the game is repeated and finally the various steps are taken in unison.
>
> Sometimes there is a vocal accompaniment. Sometimes the form is followed without words, but always with laughter.

A game like this may never be repeated exactly, but other similar group activities are devised again and again by the children. And the group generally gives an eager response. It is apparent that there is no need for the adult to take the initiative in a healthy activity of this sort.

A rich play life with the parent or teacher in preschools the child must have. At the same time, however, he needs to be able and satisfied to play alone for periods of time. "There are many ways," says Lee,[5] "of simplifying life to a very small child—chief of which is to refrain from complicating it by too many toys, too many people, too much change of scene. Besides the need of quiet,

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[4] Johnson, H. M., in a manuscript submitted for use in Yearbook.
[5] Lee (13), pp. 80 ff.

there is the need to organize, to get back where there are few objects and all of these familiar, to set one's house in order, unify one's world. . . . There should be, even in earliest life, the habit of the up-against-it, of taking-your-universe-straight, free from the disguising medium of adult interference.''

IV. Summary

Play is the means by which children attain their fullest development, in growth and in coördination. Through play the earliest learning and thinking take place.

The child needs materials for his play—sturdy, safe, and chosen for the purpose of encouraging many kinds of wholesome physical activity. At the same time, play equipment of the right kind will encourage his imaginative and creative interest and will aid in his social development if he is fortunate enough to have companions.

The function of adults is to encourage the child in his play while avoiding getting overdependent on them.

As Lee[6] indicates, the test of true educational experience is ''that it leaves a larger personality behind. . . . This characteristic . . . . is possessed by play and, to the full extent, by play alone. It is only in his play that the child's whole power is called forth, that he gets himself entirely into what he does. Or rather, in play he puts more than himself into it, more than was actually there, or would ever have existed if called for by a less powerful enchanter. Play is like a chemical reaction; in it the child's nature leaps out toward its own and takes possession.''

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CHAPTER IX

CHILD ACTIVITIES LEADING TO ART EXPERIENCES

A. MUSIC AND RHYTHM[1]

I. Values

1. The Pleasure of the Experience

The child's musical development during the preschool years is of importance if for no other reason than the joyousness of the experience. Although there still needs to be definite research in regard to the value of music education in these early years, there have been instances enough in the cases under observation to prove that early provision for music education is a wise measure.

2. The Natural Interest of the Child

The young child shows a strong natural interest in sound and movement, which is the basis of any musical experience. As with any other strong interest, it is advisable to use this when it manifests itself. A study of the best current practice in the music education of children shows that in cases where the music interests of young children have been utilized as they appeared, the music development of such children has progressed steadily.

3. A Foundation for Later Interests

The music education given to the child in these early years constitutes a foundation for all later musical experiences. Music affects the emotions, and the early experiences influence fundamentally the attitude toward all music. "Early intimacy with

[1] This section is based largely upon the material submitted by Alice C. Brill, Iowa Child Welfare Research Station; Miriam H. Brubaker, National Kindergarten and Elementary College; Kate Stearns Page, the Park School, Brookline, Mass.; E. Mae Raymond and Alice G. Thorn (co-authors), Teachers' College, Columbia University; Thomas Whitney Surette, Concord Summer School of Music, Concord, Mass.; supplemented by that of Anne E. Pierce, State University of Iowa, and Mrs. C. L. Robbins, Iowa City. An annotated outline referring to specific references in her book "Creative Music for Children" has been submitted by Satis N. Coleman, the Lincoln School of Teachers' College, Columbia University. Ruth Updegraff, Iowa Child Welfare Research Station, has aided in the editorial preparation of the manuscript and is mainly responsible for the references.

music he will never lose, and it will be a means of happiness and comfort to him all his life."[2]

4. A Means for Growth in Poise and in Bodily Control

"If all constraining influences were removed from the time of birth, doubtless all children would have . . . freedom of body," writes Coleman.[3] . . . "Who can tell how much natural musical power has been buried in a stiff little body, has been atrophied, and has never been recognized because it was denied the outlet of rhythmic bodily expression as the *natural starting point* in its growth?"

II. Child Activities

1. The Course of Development

a. Individual Differences. In musical ability, as in other forms of development, children differ from one another. While there has been little published research on individual differences among preschool children, studies like those conducted with the Seashore (29) tests of musical abilities on older children and adults reveal the wide ranges of ability that exist in sense of pitch, intensity, time, consonance, tonal memory, and rhythmic discrimination. Presumably similar differences exist in the younger ages. Hence, while there is a general course of development through which children pass as they progress in age, there are yet wide differences within this range. Methods which may help one child may not meet the needs of another. Nevertheless, although children may thus differ in musical capacity, it is in the main true that each will gain something from being placed in a musical environment.

b. Growth in Rhythm. Response to rhythm, as Coleman indicates, is made early from sensori-motor learning. "As early as a baby can use his eye muscles enough to watch a moving object, he is fascinated apparently by the rhythmic swaying of objects. . . . . Most children develop the sense of rhythm before they acquire an appreciation of tone, and they are able to coördinate the muscles of their bodies in dancing before they can produce definite melodies."[4]

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[2] Coleman (2), p. 153.
[3] Coleman (2), pp. 82 f.
[4] Coleman (2), pp. 85, 99.

c. Experimentation with Sound. The child's love of experimenting with sounds through vocalization and through musical instruments is another early activity. Those who have observed and recorded the natural expressions of young children find that they fall into a rhythm of speaking and of singing, and of making sounds in short, rhythmic patterns. They enjoy repetition and alliteration. They respond to musical instruments when the melody is clear and definite.

d. Development of Vocal Mechanisms. While the child is developing in the ability to respond to rhythm, his vocal organs are also developing, and he is growing in his ability to control his pitch. At the same time, his interest in participation with others is increasing, even though there is little accuracy. Ability to coördinate pitch and rhythm increases, although these stages are not always attained during the preschool years.

e. Need of Research. These general trends are apparent from observation. We lack, however, any extended research into the course of the preschool child's musical development. As Stewart (15) points out, we know very little about what music means to the very young child; nor do we know how much he hears of a musical phrase or to what degree he is conscious of its form and its pattern. Much might be learned concerning the effect of music on children of preschool age by patient observation of their free responses to the environment provided.

2. The Child's Interests

By the time the child is five or six, his increased skill and wider experience may enable him to express his musical interests differently, but the interests themselves seem to be as strong in the early years as in the later. The major musical interests and forms of expression develop more or less in the following order: (1) interest in experimenting with sound, leading to vocalization and the use of musical instruments, (2) interest in listening to others, and (3) interest in rhythmic activities.

III. The Rôle of the Adult in Guiding the Child's Musical Activities

Following the order of the child's interests just mentioned, suggestions are next made on what the adult can do in guiding the child's musical activities.

1. Interest in Sound Manipulation

a. Vocalization. The child may be encouraged to sing from the time that he shows evidence of an interest in experimenting with sound.

With the infant the mother's encouragement may take the form of playing with sound. For example, when a baby, as often happens, makes soft murmuring sounds with a well-defined pitch, the mother may repeat these sounds. She may call to the baby in two tones or may play hide and seek, and the baby may try to imitate the sound. Children of two and three years probably are not ready for group singing, but show keen enjoyment in playing with sound. Sometimes a child makes happy rhythmic sounds when swinging; then the adult may join in the song, adding simple words to the melody. The beginning of singing is usually an individual matter, but it may appear in a group of two or three children as the desire to express takes form in song. The mother or teacher also can encourage a singing response by providing a musical environment that gives the child opportunity to hear good music of various types which is played or sung to him.

With somewhat older preschool children, many of the songs are still the spontaneous individual expression of the child's idea or mood, but one finds also a definite group interest in singing the songs which others have created. "A child's music during the first six years," writes Surette,[5] "should consist chiefly in learning to sing, by ear first at his mother's knee and afterwards in school, as many beautiful songs as possible. Folk songs are the natural material for such purposes. This procedure provides the necessary experience of music as such, unhampered by any information or teaching of notation. This experience not only develops the taste and the ear of the child, but also, which is important, the sense of rhythm. . . . The practice in American schools of teaching children to read music by means of the *do re mi* system does more than anything else to ruin their chances of caring for music in after years."

Others agree that singing by children before the age of five should be spontaneous, never demanded. The determining agent for the encouragement of singing depends entirely on the child.

[5] In material submitted for use in this Yearbook.

It has been found by Coleman (2) and others that children learn best to sing by attempting to imitate, without having their early attention called to their inaccuracies of pitch. Freedom in forming sounds is recommended. Some persons believe that one means of acquiring fundamental voice control is by unrestrained experience in singing.

Songs selected for young children to sing should be easy, with a range within an octave, and with simple and natural intervals. Surette[6] writes: "We now have enough good music so that it is not necessary for children to sing or play anything else. The first years should be devoted to singing folk songs. Tunes made up by one person or another for novelty or sensation are much to be deplored, because it is practically impossible for a person composing them to write in the simple idiom of childhood melodies independent of all harmony. It is easy enough to make a logical little tune to fit words, but to make such a tune with the breath of life in it is not to be expected. Of the thousands of tunes made chiefly by supervisors of music, there are none that have thus far had any survival value."

Children are interested in composing little songs. If one listens to them at their play, one can catch from time to time snatches of song. The compositions have certain characteristics. They are gay and spontaneous, short and fragmentary—often because of this they are not recognized by adults as the stuff that songs are made of. Sometimes there is repetition of a short phrase, chanted perhaps on two or three notes; sometimes they are never the same twice. These may be used as a basis for developing creative expression through song.

b. Use of Musical Instruments. In the preschool years considerable emphasis may be given to the experimental use of simple musical instruments. The characteristics of the activities growing out of this are: individual rather than group interest in using the instruments, interest in the mere making of sound, and the occasional evolution of a melody or rhythmic pattern. The teacher may meet the child's individual needs by playing his rhythmic pattern on an instrument or by supplementing the experience with other music having the same pattern.

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[6] Surette, T. W. *Loc. cit.*

Any child who has a fairly clear perception of rhythm enjoys accenting rhythm with some sort of percussion instrument. Besides percussion instruments there are suggested the four-tone chimes (of pipes, bells, brass, wood, etc.). Chimes are excellent for the two-year-old, who cannot go wrong with them, as any note can be played singly or with any other. With this instrument may be made short games and harmonic combinations. Sleigh-bells of melodious tones, Swiss bells, the zither, children enjoy. The triangle, the tambourine, and cymbals are suggested for children from four to five years of age, who have more steadiness and control. These last four instruments can be played in 'concert' by groups of children. Such group playing is an aid in the development of rhythm, in the participation in simple ensemble playing, and in the extension of acquaintance with musical compositions. Children of five or six years have been found able to play simple melodies in such groups.

It is suggested also that young children be allowed to strum (not to pound) on the piano, as this opportunity often leads them to pick out little melodies.

It has been found that young children are able to make simple musical instruments. Coleman (2), a pioneer in this field, attributes much value to this activity. The playing of the very young child is of the simplest kind in the beginning; his instruments and his songs are of small range, often involving only two or three notes. Children enjoy familiar things in new forms; the discovery of a different way to produce a melody which they know how to sing links up the new and the old experiences in a way that greatly pleases them.

3. Interest in Listening to Music

a. Size of Groups. Group experience in music should be provided for those who spontaneously show a need for it. The expression of this need is largely an individual matter and almost never comes from all the group.

The increased social maturity of the older preschool child makes it possible for him to participate in a longer musical experience, to appreciate music slightly more advanced, and to enjoy music with children in a larger group.

b. Playing to Children. Children's interest in hearing music may also be encouraged by playing to them, when they are resting or when they are in a quiet mood, from the music of classic composers, such as one would play to an adult group of music lovers—the quiet music of Bach, Handel, Mozart, Beethoven, and others —also lullabies not set to words, dreamy, quiet music, or grand music not too loudly played. Descriptive music drawn from romantic composers is also suitable. Only the best material should be chosen. When singing and playing to the child, the adult may draw upon the material of folk-song of many lands, as well as parts of operas and the wealth of fine songs of classical literature. It has been found that empty, sentimental melodies, with weak, poorly organized rhythm, make little appeal to the normal child.

Seashore[7] writes: "Let the child be part of the musical atmosphere in which he hears good singing and playing, and the appreciation of music will come as naturally as does the appreciation of speech." Not too much stress should be laid upon the child's response to a definite picture, merely a suggestion to awaken his imagination. For the youngest children, owing to their short span of attention, the adult must necessarily limit the length of the experiences.

One writer suggests that much time is wasted and children led into foolish imaginings by urging them to read into the music definite meanings that the composer did not intend, though the child who has an original interpretation should be given the opportunity to contribute it. Such differing ideas as to the value of children's free interpretation of musical themes indicate the need for further observation and research on this problem.

4. Interest in Rhythmic Activity

a. Forms of Expression. During the preschool years the child will march, skip, run and gallop naturally without being taught, if suitable music is played for that purpose. The child may get his first definite feeling of rhythmic expression by such simple activities as clapping the hands together, by walking or by tapping with the hand or with a stick some hard surface or by many other natural movements.

[7] Seashore (4), p. 7.

b. Singing Games. Singing games are found to be valuable in encouraging rhythmic development. The singing is subordinated to the rhythm and the action, as it is difficult for a young child to sing and to act simultaneously; but definite rhythmic action, combined with the music, helps to develop the child's sense of form and phrasing as well as rhythm.

The accuracy of the child's response to rhythmic music is not a matter of agreement. The point of view of many writers is expressed by the suggestion: "Let the children fall naturally into the sense of the music in their physical reactions."[8] This is a matter where research would be of significant help to the teacher or parent.

c. Natural Response of the Child. When the form of the expression starts originally with the child, he has a fundamental basis of understanding it and is ready to appreciate it when he hears it in some other instrument. If rhythms are played for children, they will be simple at first and will call for only one general response, such as a skip or walk or simple dance; for the older children compositions may be played to which the child can respond with a greater variety of action.

5. Encouraging the Child to Discriminate Sounds

The possibilities of encouraging the child to listen to and enjoy the sounds in his environment have been discussed in the section on Language Development. Johnson[9] has many valuable suggestions here for teacher and parent.

IV. Summary

It is not possible to recommend very specific definite procedures for the adult's guidance of the child's musical education. The procedures must vary with the individual interests and abilities of both child and adult. As musical experience is a matter of individual development, the procedures of training will be based upon the children's individual abilities. Children should be carefully observed, to find out to what they respond and what their true interests are; care should be taken that the interests built up are vivid and personal. Later research in this field may change in

[8] Page, K. S. Manuscript submitted for use in this Yearbook.
[9] See reference 26.

many aspects the present rather sketchy principles underlying musical education.

B. OTHER ARTS[10]

I. VALUES

1. Experimentation

"What can we learn about the development of the 'artistic process' by observing little children?" writes Mathias.[11] "Let us give the small child paper, a material that is new to him. He rattles it, crumples it, twists or tears it. There is no evidence of his attempt to use it as a medium of expression. We then put clay at his disposal. He rolls it, kneads it, breaks it into small pieces, but still there is no expression. He greets each new material with an attitude of 'What are you?' not 'What can I do with you?' He proceeds to get acquainted. Observation shows that little children delight in the exploration of a medium."

The first response of the child to materials, then, is experimental. In the preschool years, as in the later years, one of the primary purposes in placing art materials at the disposal of the children is not solely to develop creative ability, but to extend the child's range of experience, to develop motor skills and control, and to provide for his enjoyment in working with color and form and tools.

When young children have the opportunity of experimenting with art materials, they learn, in an orderly and related way, some of the qualities of pigments and color, paper, brushes, and water. They acquire a more discriminating awareness of touch and more skillful control of hand. In fact, their first interest in modeling and painting may not be that of creative reproduction, but of the pleasure of the sensations they experience in working with the materials.

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[10] This section is based largely on the material submitted by Emma Henton and Ellen Miller (co-authors), the Merrill-Palmer School, Detroit; and Ruth Raymond, College of Education, University of Minnesota; supplemented by that of Royal B. Farnum, Massachusetts State Director of Art Education; C. Valentine Kirby, Pennsylvania State Director of Art Education; and Willy Levin, Bureau of Educational Experiments, New York.

Ida Mengert and Myrtle Stites, Iowa Child Welfare Research Station, have given constructive criticism during the preparation of the manuscript. Mrs. Mengert is responsible in the main for the references.

[11] Mathias (62), p. 6.

In order to give the young child these experiences we include, then, among the materials to which he has access, plastic and color materials which lend themselves to varied manipulation.

2. Opportunity for Carrying Out Purposes

There is another aspect of the value of providing suitable art material for the young child—its bearing on his general development. Through adequate outlets for working out his increasing interests, for expressing and attaining his purpose, and for understanding his own powers in relation to his environment, the child's purposes tend to become integrated. If he has many materials by which he can express his ideas, can create in his own way, the great force of his dynamic energies will be directed into constructive channels; and the result is an absorbed, contented, happy child learning to master his own difficulties. Lacking such outlets, he will be still active, but often in channels which are less conducive to his own happiness or the welfare of others.

II. Child Activities[12]

1. Woodworking

a. Values. Wood is a medium excellent for the use of young children. Through it the child has opportunity for the constructive use of energy. He enjoys working against the resistance which wood offers. It offers a wholesome channel for activity: for example, a hand raised to strike another child may be quickly transformed into a hand raised in the legitimate activity of hammering a nail into wood meant for that purpose. Thus a desirable attitude replaces an undesirable act when both are based on the same physiological need for outlet of energy or attainment of equilibrium.

Another value of wood as a medium lies in the fact that through manipulation and construction the child gains concepts of his own power and his own limitations in relation to his environment. He gains experience in concepts of size, of weight; he is led to experiment and to be aware of the need for carefulness in learning to handle tools.

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[12] For a discussion of dramatic art, see Ch. X.

b. Materials. The young child needs few tools in his construction, but those he has should be strong, unbreakable, and of good material. The following are suggested: hammer of medium weight; saws, cross-cut or hack-saws; nails with wide flat heads; wood, soft white pine, country pine, bass wood, or poplar.

c. The Process of Constructing. Many parents find that they can provide a homemade workbench or a sturdy, low table which is quite satisfactory for constructing. In his work with wood the child gains his pleasure and his values through the process more than through the finished product. No matter how crude the result, he has the experience of thinking through certain processes himself and of devising ways and means to meet his own needs. He gains, as a rule, more pleasure from simple toys which he fashions for himself than from those bought for him at much greater expense.

It is the observation of many teachers in nursery schools and kindergartens that an interest in the activity afforded through such construction has a fundamental positive influence in the development of certain children. One has only to observe groups of children who have access to a workbench to see how constantly it is the center of absorbed interest. It is a means of social coöperation and is often the factor by which some child finds a guiding purpose which shapes his general bearing and attitude toward himself and others.

2. Crayoning and Painting

Drawing for the child is language; a means by which he can reproduce his experiences and explain them to others.

a. Experimental Studies. Many studies have been made of children's drawings, which are of direct educational significance.

Barnes (77) found that until the age of thirteen or fourteen the children he tested were willing to attempt drawing any scene, no matter how difficult. The scenes chosen by the young children almost invariably were those of action and dramatic interest; the drawings portrayed dynamic, continuous action, rather than a single complete situation.

Ricci (105) found that young children use drawing as language, trying to describe graphically as they would with words, that they try to make every part of their picture visible, and that they are

interested in details and in peculiarities. Other students of the drawings of preschool children are led to the observation that children's paintings often are not visual representations, but dramatizations of things they have experienced or imagined. "This is a man going down in an elevator" is simply a line of paint, running down the page. Children do not paint a picture of what they see with the eye; they paint things as they appear to the mind's eye. Objects may have three dimensions, but no perspective.

Many of the paintings of young children have artistic value. The color is usually pleasing, and there is often balance, rhythm, repetition, and unity—qualities of design hardly to be expected at these ages, yet it is often uncertain whether these effects are the result of conscious effort or accident. But is it evident from observation that the child, having made a pleasing motion with his hand or an interesting form with his brush, may wish to repeat the sensation with design as the result. Whether by chance or premeditated effort, the painted design has value as an experience in beauty and symmetry.

Further observation indicates that, when the children suggest titles for their pictures, there is often beauty of expression and surprising evidence of poetic imagination. A painting of trees was called "The Pillars That Hold Up the World." Another painting was called "The Church with the Broken Bell," and another "Trees Far Out."

b. Educational Interpretations. The various experimental studies lead to more or less consistent conclusions. Teaching in art should follow the genetic development of the child rather than a logical order, and great freedom of expression should be permitted, indeed encouraged, especially in the early years.

It is odd that these recommendations, based as they are upon the analytic study of numerous drawings, should have had so little influence in pedagogical circles. Current educational practice during the decade (1890-1900) when the studies were most numerous, was in general based on quite different principles. What influence the studies had was not extensive, and there is little reference in educational texts to this rich and increasing store of psychological research.

c. Values. "We may smile at his (the child's) crude productions, but for him they glow with the warmth of his own personal-

ity and throb with life and action. Drawing for him is language, not indifferent and clumsy portrayal of the objective world . . . By this process of externalizing the internal he comes into nearer kinship with his environment. Drawing is therefore highly educative; but if it is not related to his own experiences, and ceases to be self-expressive, it becomes merely a reproduction of the external and cannot stimulate growth.'"[13]

One writer expresses his opinion thus: If children are introduced to art materials early, before they have any desire to produce visual representations and before adult techniques and standards of achievement are imposed upon them, it would seem that the self-consciousness, lack of spontaneity, and dissatisfaction with their efforts expressed in such phrases as "I can't do it," "You do it for me," "What shall I make?" so often observed in older children when they are asked to work with art materials, might be avoided. When young children are left quite free to work as they choose with art materials, their work is spontaneous, free, and original. Only instructions about the care of materials, such as how to wash brushes and keep paints clean, are necessary or perhaps desirable at these early ages.

A similar opinion with regard to much directed teaching is: "In the use of materials, I feel that guidance and spontaneous activity should go . . . hand in hand . . . I am inclined to think that in actual education with children, especially before the sixth year, there is too much conscious teaching effort. Children should be allowed to grow like plants . . . A watchful eye and silent tongue should be the guiding principle, but the watchful eye should be unobserved by the child."

Another writer, in referring to the efforts of the young child, contends that the adult should not "show him how," but should praise every successful attempt to get the idea across, and call attention to the means that brought the success. "We know the boy in your picture is running. See how his leg is bent." Group work is very valuable, for the successful communication of ideas to other children is the right criterion of achievement.

e. Materials. In choosing materials for preschool children it is suggested from observations that the materials be large enough to permit freedom of movement and design, and to obtain effects quickly. Among those which have been used and found valuable are: thick enlarged art crayons, large pencils, non-poisonous water-colors, unprinted newspaper in large sheets, bogus and manila drawing paper, large common paint brushes, camel's hair water-color brushes, small paddles and sturdy jars for mixing paints, and easels with tray for paints.

[13] Gesell (51), p. 128.

3. Paper Cutting and Tearing

a. Values. Very lovely effects of snow, of clouds, of ocean, of action, of many phases of nature where undulating or irregular outlines are characteristic can be produced readily. The arranging of objects to go into such a picture is sometimes the child's first experience in attempting composition.

b. Equipment. Paste and scissors and many kinds of inexpensive papers are all that are needed. Colored construction papers, of light and medium weight, are used in some preschool groups.

4. Modeling

a. Values. Gesell (51) indicates the importance to the individual of the development of the sense of touch. Clay is peculiarly responsive to the slightest impression, and is most satisfying to feel and to handle.

"Clay is the perfect plastic material," writes Mathias.[14] "The children who have been fortunate enough to have experienced the joys of making mud pies rejoice at finding mud that sticks together while they model and which will not fall to pieces when it dries. The children who have missed the mud-sand-water joys greet the new material with such delight as can be understood only by the initiated."

b. Materials. Potter's clay, large containers, small breadboards, oil-cloth, and lacquer, have been found useful.

5. Experimenting with Colored Fabrics

a. Values. Children delight in experimenting with costumes. Through opportunity to arrange fabrics in folds on themselves or one another and to try different color combinations, they gain experience in observing beauty of line and of color.

b. Materials. Large pieces of soft fabrics, muslin, cheese cloth, silk, or crepe, in various colors.

6. Other Activities

Other experiences in art which young children have been found to enjoy include simple stick printing, weaving with thick strands or with roving, dyeing, and candle-dipping.

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[14] Mathias (62), p. 15.

III. Art in the Environment of Little Children[15]

1. Importance of Care in the Selection of Furnishings

That the child is sensitive to his surroundings is well known. For this reason it is recommended that careful attention be paid to the furnishings of his home and his playroom. It is possible to combine beauty of line, color, and proportion with simplicity, and to have the furnishings harmonious and restful.

The child, as the adult, responds to a feeling of space and of freedom, and it is well to avoid filling his room with objects or pictures which might clutter or confuse. A few beautiful objects or pictures chosen with an understanding of the child's need and interest are better than indiscriminate numbers. The child loves color and vivid beauty. These can be set in a background which is quiet and harmonious. There is a growing tendency in nursery schools and kindergartens to bring into the playroom rich and beautiful colors, but more careful study is needed of the effects on the children of the colors in their environment. It is possible for the draperies, for the shelves, for the toys and apparatus, for the friezes on the wall, to be colorful. What these colors should be and what combinations are suitable for the young child, are not yet determined, although some experiments have been made.

2. Values of Pictures: Contrasting Opinions

There are contrasting opinions about pictures for young children. Many believe that a few pictures are advisable if these pictures have subject matter appealing to the child and are not complicated with detail. Subjects which young children enjoy are the activities of other children, of babies, of animals, and of mechanical objects such as boats and trains, especially when they are shown in motion. There is a growing tendency to use large poster pictures. Some artists suggest whimsical characters for pictures for the older preschool child, such as Humpty-Dumpty, dwarfs, and fairies.

3. Principles Governing Selection of Pictures

If it is decided to put pictures in the child's room, certain general principles for their choice are suggested:[16]

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[15] Much of this section is based on material submitted by Otto Ege, the Cleveland School of Art, Cleveland, Ohio.

[16] Ege, Otto. In manuscript submitted for use in this Yearbook.

a. Action of such unmistakable character that it tells or suggests a story.
b. Simplicity and intensity of color, with the elimination of all shading.
c. Elimination of all aerial perspective and accessories that do not help tell the story.
d. Right emotional content through the illustration. The Sunday Supplements have unmistakable gestures, decided action, simple color, and make a tremendous appeal to every child, but their story content is almost invariably pernicious.
e. Consideration of children's pictures as their heritage. Since they appeal to children's emotions, it is possible that they make lasting impressions.[17]

In planning for the child's furnishings, the adult may give the child opportunity for coöperative help in selecting, arranging, and using the pictures and furnishings in his room, *e.g.*, the wall hangings, decorations, bed coverings, floor coverings, toys, books, and other materials. Experience in selection is an aid to developing understanding and good taste.

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CHAPTER X

CHILD ACTIVITIES IN LANGUAGE AND LITERATURE[1]

I. Introduction

The child enters the world endowed with a rich social heritage, a large part of which may be attributed to the development of language through the centuries. That "social unity can be secured only when some method is provided for holding individuals to the same inner patterns of thought and desire" has been pointed out by Judd. "That device for producing a common way of thinking was developed in language . . . Language is not merely a vehicle for the transmission of ideas from mind to mind; it is a compelling institution which forces men to become alike in their associations of ideas."[2] Countless generations have coöperated to simplify and systematize the collections of ideas that have been in the possession of the groups.

The human race has evolved a rich store of modes of communication. Gestures, movements, tones of voice, facial expressions, rhythm, dancing, and many other means of expression have had their place. The immediate environment into which the child is brought is colored and shaped by this social growth; the ideas and expressions of those about him are influenced by these social heritages. In all of his relations with others the child is either called upon to understand the world about him and its communication to him or to make known his own needs and desires to others. The child's development is dependent largely upon growth in such understanding and expression.

Speech is both a product of ideation and an aid to its development. Words and sentences "are the means by which members of a social group exchange ideas and through this exchange help one

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[1] This chapter is based generally on the material submitted by Sarah T. Barrows, California State Department of Education; Percival Chubb, Leader of the Ethical Society of St. Louis; Madeline Darrough Horn, Chairman, Child Study Committee, International Kindergarten Union; Frances Kern, National Kindergarten and Elementary College; Hughes Mearns, New York University; Lucy Sprague Mitchell, Bureau of Educational Experiments, New York; and Hugh Walpole, Keswick, England. It is supplemented by the material of Smiley Blanton, Vassar College; and Katherine Martin, School of Education, University of Chicago.

[2] Judd (14), p. 210.

another to arrive at clearer and more productive sequences of thought. Words, more than any other social device, are the means by which minds react upon themselves and control and refine their own operations.'"[3] It is difficult to estimate the extent of the effect of language upon growth in intellect. Language is important not only in the development of intellect, but also in the social and emotional growth of the child and in all other phases of his development involving understanding of the attitudes, moods, desires, and ideas of others.

The child's language expression is a direct outgrowth of his needs and desires. Language is not an end, but a means to an end. The process of acquiring spoken language is of the utmost complexity and delicacy; it involves many fine adjustments which are dependent upon physiological, neurological, and emotional conditions. The possession of adequate and of beautiful means of expression is an asset to the individual throughout his entire life.

II. Methods of Enriching the Child's Language Environment

That there are wide individual differences in the development of language in young children has been shown in Chapter III. Growth in language is closely bound up with other phases of the child's development. Johnson (13) has pointed out its relation to motor activities, rhythm, the elation and satisfaction which come from extension of experience, play, and social contacts with young children. Its relation to mental growth has already been mentioned.

The fact that relationship exists between favoring environment and language development is of great educational significance. There is need at present for knowledge regarding the constituent parts of these favoring environments. A wise planning for a rich environment will include provisions favorable not only for language development *per se* but for growth in other respects as well.

1. Opportunities for Meaningful Experiences and Spontaneous Expression

Children learn through experimenting, through manipulating, through moving things about, through changing the environment

[3] Judd (14), p. 193.

to suit their purposes. Opportunities for experimentation and expression of interests may be provided in part through suitable play materials. Everyday affairs may be subjects of interesting conversation. The parts of the child's body, the names of his clothes, the objects about him are of vital interest. The social activities in which he participates are experiences through which he may acquire many language meanings. The young child often accompanies his activities with a murmured monologue, perhaps repeating over and over single words, or again carrying on a dialogue with his toys and himself as the actor. He must have many new experiences if expression is to result. He must go forth and see, and touch, and smell, and hear; and the more of these sense appeals that occur simultaneously, the clearer will be the impression and the greater the impulse toward expression. Children are immediately responsive, as Johnson (13) points out, to adults who meet them with methods of play in the use of language.

2. Conditions Fostering Favorable Attitudes toward Speech

a. Building Up Self-Confidence. Self-confidence is seldom a matter of accident or native endowment. It is rather built up by the early conditions under which the child lives. If he is treated with respect by the adults about him, if his small attempts to exercise speech meet with success, if he knows that the persons about him take genuine pleasure in what he says, and that they have confidence in his desire to do his best, he is apt to have more self-confidence in regard to speech. Blanton advises parents to give the child a wholesome degree of praise for his successes, for this is one of the most important standards by which the child can estimate his social endeavors. "To hurt a child's self-confidence is to hurt him in his most vulnerable spot, and in the way that is most destructive in his after years of adjustment."[4]

b. Tranquillity. One of the most subtle, yet profound influences upon the personality of the child is the degree of tranquillity in the environment in which he lives. He notes with astonishing sensitiveness the feelings of those about him. If there exists an

[4] Blanton (5), p. 247.

atmosphere of hurry or personal strain in the home or school, he reacts to it. In peaceful and serene surroundings he may grow and develop in a wholesome, normal manner.

c. Friendliness. Social contacts with adults and with other children are fundamental to the child's speech development. The ability to express himself to other children and to share, through conversation, interests which are normal for their years, aids in the maintenance of a wholesome course of development. It tends to prevent, on the one hand, lingering in infantile forms of expression, and on the other hand, playing for adult attention and constant admiration. Sometimes lack of opportunity to talk with others of the same age, interests, and abilities, may intensify the feelings and desires of the oversensitive child or may cause the child of a different temperament to compensate by very aggressive and dominating behavior.

3. Conditions Fostering Unfavorable Attitudes toward Speech

a. Conditions Fostering Shyness. Among the many causes of shyness may be the feeling of inadequacy. Thom (23) points out that parents constantly seek to "keep children in their place" by impressing upon them their small size, immaturity, and inexperience. Not infrequently they ridicule the child's mistake in speech or so ignore the things he says that he feels them to be of little value.

If a child is aloof in a new social situation, it is wise to ignore the fact by attending to other matters until he has had time to adjust himself. Any superficial way of trying suddenly to force the child to overcome his shyness seldom bears permanent results. He needs rather the gradual building up of habits of self-assurance.

b. Domination of the Child by the Adult. In some homes there is room for the development of only one personality; the will of the father, mother, or some one child dominates the others. "There is nothing more pathetic than the child who has the misfortune to inherit parents who refuse to allow him to grow up; who deny him opportunities for developing a personality from the mental characteristics with which he was originally endowed. . . . How many parents dominate the thoughts and actions of their children . . . . and wait upon them to the point where the child is simply vege-

tating."[5] Such a régime for the child may be reflected in habits of language which lack vigor and originality.

c. Conditions Fostering Negativism. Negativism is a common and frequently temporary phase in the normal process of growing up. Thom recommends a wholesome neglect of these manifestations, giving the child time to work out his own plans whenever possible. "Let the child learn by experience that his way of doing things works out to his disadvantage."[6] Sometimes an attitude of defiance is built up in the child through the exacting methods of the parents; in such situations the child may not talk until the parents face the difficulty frankly and change their attitudes.

d. Lack of Necessity for Speech. Sometimes speech development is delayed because the child feels no need for speaking. Blanton and others emphasize the advantage of encouraging the child to say what he wants rather than interpreting his sounds, reaching, pointing, or screaming. "Give the child a chance to hear good speech plus an active impulse for acquiring it, and the child with a normal brain and nervous system will develop speech."[7]

4. Building Up Habits of Speech

The formation of speech habits requires many delicate adjustments. The characteristic quality of speech sounds is determined by the shape of the resonator, and the shape and size of the channel through which the breath stream passes out of the mouth. Gesell stresses the importance to the child of acquiring rhythmic breathing habits. He points out that even though the structural elements are in good order their functioning depends upon the fundamental habits of breathing. "A pure tone is dependent upon health, breath control, emotional attitude, imitation, and the physical formation of the speech organs."[8] Johnson (13) finds that a young child uses his vocal equipment most frequently during times of general motor activity, and that early vocalizations are an integral part of his joy in the general output of energy.

The child seeks to adapt to what he hears about him. Gradually, having heard the same sounds repeated in approximately the same

[5] Thom (23), p. 32.
[6] Thom (23), p. 118.
[7] Blanton, S. Manuscript submitted for this Yearbook.
[8] Gesell (10), p. 161.

way through a long period of time, he becomes less and less discriminating, and thus modification of his sounds becomes more difficult.

5. Influence of the Adult's Speech

"Nor has the teacher treated seriously enough her own influence—the influence of her habits of speech; her power to affect the child through suggestion, her tone of mind, the expressive, magnetic quality of her voice," writes Chubb.[9] "The last is the most important of all—the sympathetic touch of the voice on the nature of the child. . . . It is the beginning of wisdom to recognize that the ear is the pathway, not only to the heart, as the French say, but to the mind. . . . The pleasant voice and delivery, the breeding implied in correct speech, the evidence of character and culture in the touch of distinction in the vocabulary, the power of graphic description and narration"[10] are assets and sources of pleasure throughout life.

6. Assistance in Early Speech Difficulties

While the teacher's ability to use her own voice correctly in clear, clean-cut speech is of prime importance, it must be supplemented by a knowledge of certain technical aspects of good speech. The ability to detect defects in voice and in speech and to distinguish between speech defects and poor speech habits is essential. It is well to know also whether correction should be attempted, and which difficulties should be referred to speech specialists or physicians. The application of scientific methods to the correction of speech difficulties is important. Unwise training may do great harm. It seems best that much of the corrective work with the very young child be in the form of play, in order to avoid self-consciousness and tension.

Speech difficulties and defects are significant handicaps in a child life, reaching into many phases of his behavior. When ability to speak does not develop coördinately with social interest and the child cannot make himself understood well enough to gain his purpose, he may become irritable and quarrelsome.

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[9] Chubb (8), p. 36.

[10] Chubb (8), p. 375.

III. The Relation of Literature to Language Development

1. Values of Literature

"Probably the chief values of literature in the life of children under five," writes Mitchell,[11] "lie in the way language is used rather than in what it says. To rhythm and to sound quality, small children are extremely sensitive, as their spontaneous, untaught vocalizations show. . . . Small children use rhythm and sound as pleasurable ends in themselves."

"Literature," Chubb[12] writes, "begins with the songs and stories and dramatizations used by mothers and nurses to entertain the child, to engage its energies and develop them into 'play,' to soothe it, or to lull it to sleep." Words "are integrated with activities, and associated with song, movement, gesture, and dramatization." Literature "has its first significance in the life of the child as a means of outlet for his exuberant energies in lyrical and dramatic form. It gives form, meaning, and momentum to his play. He wants to sing as birds do, to caper as goats do; and words help to give meanings and patterns to his singing and shouting, his leaping and mimicries."

Literature is "a living thing, subserving the purposes of living; including work-songs (or songs of occupation), as well as play songs."

While the song and dance and game are mostly for activity, "the story calls for pause and rest and quiet. The child listens and is enchanted—for we ought to be able to use that word in its true sense. The best stories are all 'enchanted.' . . . Folk material will lead on to art material, the work of the individual master; and the two will be kept going together. Out of this art-poetry we shall choose mostly that which is musically alluring, and sings its way into the child's mind."

Bryant[13] emphasizes the enjoyment of literature: "The message of the story is the message of beauty. . . . Its part in the economy of life is *to give joy*. . . . To give joy; in and through the joy to stir and feed the life of the spirit; is not this the legitimate function of the story in education?"

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[11] Mitchell, L. S. In a manuscript submitted for this Yearbook.
[12] Chubb, P. In a manuscript submitted for this Yearbook.
[13] Bryant (6), p. 3.

Fostering of creative expression is emphasized by Mearns (15) and by increasing numbers of others who have aided in creating an environment whereby children have been free to express themselves in poem or in prose. Above all "a child's interest in creative self-expression should be *always* individual. Everything should be done to prevent the child's creative feeling from becoming standardized."[14]

2. Stories and Poetry for Young Children

In selecting stories and poems for young children it is suggested that care be taken that the content be patternful, and the repetition simple enough for the child to comprehend it as a unit. It is recommended that the idea be conveyed in terms of the child's own experience, and in such manner that he may recall the experience in specific muscle and sense terms, and that he be given opportunity when possible to make some motor response.

Beauty of form and of content should be adhered to as closely in literature for children as for adults. Direct and spontaneous expression with a strong feeling for rhythm and cadence is desirable.

In the nursery there is need for more stories of fact, which will enable the child to understand more fully his relationships to the world about him. On all sides the child meets elements which are new and strange to him, and the story which explains his personal experiences in terms of the larger environment may be as full of wonder and delight to him as the tale of fancy. Mitchell (16) and Johnson (13) suggest the value of first listening to the child, then inventing the material to fit the occasion and the child, and thus avoiding too great dependence on the printed form.

For the child of preschool years there is not settled agreement upon the value of fairy tales. It is certain that the gruesome or highly exciting are not wise, but to what degree the young child is able to comprehend fancy as distinct from reality and to get the real value of fairy-tales is a matter needing experimental study.

As Walpole writes, stories should be based on "principles of beauty, truth, honorable and just conduct, compassion and kindliness."

[14] Walpole, Hugh. In a manuscript submitted for this Yearbook.

3. The Child's Interest in Reading

There are wide individual differences in children's readiness and eagerness for reading. The inadvisability of formal instruction in the kindergarten and the relation of vision and hearing to early reading habits are indicated in the Twenty-Fourth Yearbook of this Society (19). That Yearbook points out that essential to reading readiness are a wide experience, reasonable facility in the use of ideas, sufficient command of simple English sentences to enable the child to speak with ease and freedom, ability to recognize quickly the meaning of words, accuracy of enunciation and pronunciation, and a genuine desire to read.

Interest in writing develops similarly, depending in part upon physiological maturation, and upon abilities, experience, and desires. The total needs and development of the child govern the adult's guidance.

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CHAPTER XI

CHILD ACTIVITIES LEADING TO SOCIAL DEVELOPMENT[1]

I. The Child's Social Development: Contrasting Theories

How may the young child learn to live with others happily? How does he acquire those habits and attitudes which govern his reactions to other persons? The two leading theories to explain social development are that social development is instinctive or, on the other hand, that it is the interaction between the child and his environment.

1. Social Development Instinctive

Some writers explain the child's social behavior as the result, almost entirely, of instinct, or instincts. Although environment influences behavior a little, instinctive drives to activity are more fundamental. It has been stated that various social instincts appear in the child's behavior at different ages. For example, it is said that at five years of age, love of emulation is evident, that disobedience increases, and that the child is still selfish; while at the sixth year, jealousy, emulation, efforts at attention-getting are strong; kindliness, certain forms of fighting, and the sex instinct are not as strong as they will be later.

2. Social Development the Result of Interaction Between the Child and His Environment

On the other hand, many authorities believe that social behavior is explicable only as interaction between the child and his social environment. While the child's physical equipment with its reflexes and capacities is given by heredity, his contacts with those about him in the home, school, and neighborhood largely determine his social habits and attitudes. Social development, from this point of view, is a gradual accretion of habits and attitudes involving other persons and formed in relation to them.

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[1] Contributions have been made to this chapter by Esther Van Cleave Berne, Iowa Child Welfare Research Station; Dorothy S. Thomas and Marian Walker, Institute of Child Welfare Research, Teachers College, Columbia University.

If the instinct theory of social development is accepted, the parent and educator have little influence upon the child's social behavior. But if the social development of the child is explained as the result of the interaction of the child with those about him, it is a part with all his growth, and may be shaped to a great extent by parents, teachers, and others during his formative years. Is there evidence to support this point of view?

a. Psycho-Biological Evidence. Sherrington, Herrick, Child, and other biologists emphasize the significance of interaction upon all modifiable life. Smith summarizes the educational implications of these writers, and indicates the consistency of Dewey's philosophical theory—that "we are, by reason of those about us"—with the laboratory findings of biology concerning integration and social interaction. The educational significance of these researches is recently beginning to be realized more fully.

b. Observations of the Development of Young Children. Anderson (14), Baldwin and Stecher (1), Berne (15), Verry (21), Woolley (23, 24, 25), and others have found through their experimental studies that the social situation has a determining influence on the personality and social behavior of preschool children. Anderson, as a result of his observations, writes: "Very early in life, almost at the cradle, our social schooling commences. It proceeds with rapidity and dispatch—for the amount of stimulation is tremendous and the motivation great. Fixations occur, habits run through their course to automaticity, more complex behavior is built upon them as foundations. . . . The early experiences and reactions of the individual are of great importance. . . . The behavior of the adult toward persons has its genesis in the behavior of the child toward persons. Social behavior is of a piece with all other behavior and is governed by the same laws."[2]

II. Characteristics of Early Social Development

Behavior is essentially a social process, and little is gained by theoretical discussions as to whether social development is instinctive or conditioned. The child is born into a social environment, and throughout his life is forced to adjust on a social basis. The activities of early childhood which tend to give practice in social

[2] Anderson (14), p. 90.

adjustments are, therefore, of great importance to those connected with the preschool field.

Little can yet be formulated about the relationship of early social contacts to later social behavior. Here the most fertile fields are the case studies and life histories prepared by psychologists, psychiatrists, and sociologists.

1. Early Appearance of Social Behavior Patterns

Research now in progress indicates the very early fixation of types of social behavior, which already at the preschool level shows a marked differentiation between children.

"Charlotte Bühler (16), working with a group of 114 children, not new-born, but borrowed from nursing mothers at a milk depot, placing them together in groups of two or more, and giving them toys, found the most various reactions disclosed in the unfamiliar situation. Some were embarrassed and inactive; others were openly delighted; some pounced upon the toys and paid no attention to the children; others explored the general environment; some robbed their companions of all the toys; others proffered, exchanged, or exhibited them; some were furious in the new situation, already, in the first year, positively negativistic. It is impossible to say to what degree these children had been conditioned by association with their mothers, and how far the reactions were dispositional. But it is plain that by the end of the first year the most positive personality trends had been established."[3]

At the Minneapolis Institute of Child Welfare, a study is being made of the social interaction of young children, with reference to domination and subordination. Records made while a pair of children are left alone with one toy, in a controlled situation, indicate that patterns may be firmly established. One child used no other means of getting the toy except pleading, irrespective of what other child he was paired with; another consistently commanded children with whom he was paired to give up the toy.

At the Teachers College, Columbia University, Institute, a study of physical contacts between children shows that the proportions of aggressive to passive contacts vary from twice as many aggressive as passive for one child to eight times as many passive as aggressive

[3] See Reference 28.

for another. These and other studies indicate that already at the preschool level consistent patterns of social behavior are appearing.

III. Activities Leading to Social Development

Our lack of scientific knowledge of the field of behavior makes it impossible clearly to formulate what are desirable modes of social behavior or what activities will lead to social development along any *a priori* norms we may establish. At the present stage of knowledge, therefore, we are forced to form a commonsense evaluation of modes of social behavior, and consider those forms of behavior desirable which are practiced by individuals who are neither criminal, insane, nor suicidal, and whose social achievements we may consider admirable. As to what activities lead to these social achievements, we must appeal to the experience of the practitioners, *i.e.*, successful parents, teachers, and clinicians, for methods which have been found to work in the home, nursery school, and kindergarten, rather than appeal to those concerned in research for methods which would give predictable results.

1. Opportunities for Children to Share in the Social Activities of Groups

a. Problem of the Urban Family. The problem of social adjustment must, moreover, necessarily be considered in the present American cultural situation—relatively rapid urbanization and limitation of the size of the family. It reaches its most crucial point in regard to the only child living in a fairly large city. The rural family, with its closely spaced births, offered few problems in social adjustment compared with the problem of the modern urban family, where, if the family comprises more than one child, the births are planned to occur at intervals of several years. This means that the problem of the only child is, at least for a period of a few years, a problem facing most families. In a normal rural situation, where the births are closely spaced, and the mother is involved in the many duties of the household, the problems of the social adjustment of the children tend to be simplified. The child, although possibly through an unduly difficult process, and with many hard blows, learns to take his place as one of the relatively self-sufficient group. In the small city family, however, the process is quite different. The first child and the only child assume an overwhelming place

in the parents' attentions, particularly in the middle and upper-class family. The attention given to the child is conducive to the formation of fixations, and these in turn are likely to bring about difficulties incident to the adjustment to children born later or to children outside the family group. The child's social contacts tend to be limited to an intimate group wherein his every act assumes a place of great importance. The break from the position of center-of-interest may come first with the birth of another child. This will make necessary the development of new modes of social behavior both in relation to the adult group and to the new child.

b. The Function of the Nursery School and Kindergarten. The break from the small parent-child group to a group demanding different and more complicated social behavior may be accomplished naturally in the large family or in certain semi-rural neighborhood groups. The trend of modern life, however, is making the usual family group less able to provide that variety of situations and activities (personal and material) most conducive to social development, and is making more and more necessary the thoughtful planning of nursery schools, kindergartens, and other similar groups where early social adjustments are facilitated. In such groups the child has opportunity to learn to live with other children, to give and take, to live and let live, to share experiences, to sympathize, to lead and be led, with his peers. Johnson writes: "*A child must learn to mingle with his kind and to establish relationships with them.* They are part of his environment. As he becomes able to make these relationships successful—satisfactory to himself and to his mates—he is so much further along in the integrative process. The nursery school offers him that opportunity for social contact and its teachers must see that the relationships that develop serve the need of his age and the state of maturity to which he has arrived."[4]

2. Adjustments Demanded by Group Activities

The following examples, from actual nursery-school procedure, indicate some of the adjustments a child must make in taking his place in a group at his own age-level. The control is no longer exercised by an adult with the child as the center of attention, but

[4] Johnson (9), p. 137.

it is exercised in a genuinely social situation, where others of his own age-level are behaving in a particular way. Conformity to the norms actually set up by other children becomes his accepted mode of behavior. Snatching of toys, refusal of foods, etc., tend to be minimized because the other children do not behave in this way. The socializing process is gradual and varies greatly from child to child. In situations of this sort the pressure that is put upon a child by the teacher is slight, and his conformity to accepted modes of behavior may be quite gradual.

a. Separation from His Mother. The first, and one of the greatest social adjustments a child going to the nursery school must make, is leaving his mother. Often he has never been left, or perhaps his mother has stolen away when he did not know it; so he has no experience in his background to help him face this difficult situation. Coöperation between teacher and mother is necessary. The mother is urged to say good-bye in a happy, matter-of-fact tone, and then go. The child is told that his mother will return. Each day the length of time he is left is increased; eventually he enjoys the school and leaves his mother willingly.

b. The Rights of Others. Young children in the nursery school are just beginning to learn that everything does not center around them. The following example indicates an actual experience of the adjustment of a child from a family-centered to a socialized reaction.

> On Jack's first day he saw George riding on a pedal kiddie kar. He immediately tried to take it away. George hung on; Jack pulled. Soon both began to cry. As this was a new experience, the two children were not left to settle their difficulty, but the teacher guided Jack to another kiddie kar. Two weeks later a similar thing happened, but this time all of the kiddie kars were in use. Jack still needing some help, though less than before, the teacher said: "The children are using all of the kiddie kars. You can find something else until they're through." Jack said, "I'll get a doll carriage."

c. Coöperation. A further developmental phase in the nursery-school situation leads to actual coöperative effort. After learning to use materials in such a way as not to interfere with the projects of other children, there will often be observed a tendency to further the activities of other children (and incidentally their own) through coöperation.

Older nursery-school children often start deliberately to play together and exercise their own control of a situation. Helen, Jean, and Florence, three-and-a-half-year olds, were all playing with dolls. Soon they began to play that they were all mothers with babies out in the park. Presently Irene came along, threw the dolls on the floor, overturned the carriages, etc. Helen, who had been in the nursery school a year, said, "You can't play with us when you do that," but Irene appeared oblivious of the reprimand. The teacher standing near then suggested that Irene play on the other side of the room so that she would not bother the children. It took some time and much dissatisfaction on Irene's part before she learned that in order to be tolerated and accepted by the other children she must not upset their play. The choice had to be made between independent play with other materials or coöperative play with the desired materials on terms not entirely of her own making.

Learning to sleep in a room with other children is often a difficult adjustment. Sally, aged two years, sat up in her bed, pointed at the other children, and squealed delightedly. Each time she was told "Mary wants to sleep; John wants to sleep," etc., but to no avail. Finally, she was taken to sleep in another room, not as a punishment but because the experience was too new for her to make an adjustment. Later she was taken back, and eventually learned that in order to stay with the children in the bedroom she must be quiet so that they could sleep.

Sometimes the adjustment must be so gradual that for several days a child is just taken to see the children sleeping in a room together, and then put in a room alone to sleep. This may happen for a week or two, but the desire to take his place in the group will eventually lead the child, in most cases, to conform.

d. "Taking Turns." The processes of washing, dressing, and eating are social situations in the nursery school. Each child learns the necessity of taking his turn at the wash bowls, and the situations stimulate a gradual independence in the washing and dressing processes. Children who have always eaten alone may find it difficult to adjust to the process of eating in a group. Sometimes the social will entirely overcome the nutritive aspect of the meals. In other cases, shyness will inhibit. Here again, after practice in the situation and observation of what is the usual process, an adjustment to the group standard is brought about.

3. The Relation of Adult to Child

As Dewey has written: "We shall perceive that the social medium neither implants certain desires and ideas directly, nor yet merely establishes certain purely muscular habits of action, like 'instinctively' winking or dodging a blow. Setting up conditions

which stimulate certain visible and tangible ways of acting is the first step. Making the individual a sharer or partner in the associated activity so that he feels its success as his success, its failure as his failure, is the completing step.''[5]

For young children it is imperative that their participation in group activity should be kept flexible, and not imposed from without. The child will be permitted to take his own time. If he is in a group with others, he is aware of them and is learning from them. When he is ready, he will take his part with them; this process cannot be hurried without danger. Neither the adult nor the older child should be allowed to dominate the personality of the young child, and for this reason the nursery school may well keep the age-range of its groups within narrow limits.

It is also suggested that the teacher make the social atmosphere of preschool groups homelike and personal—avoiding too great a display of emotion on the one hand, and too formal and institutional an attitude on the other. Johnson sums up the adult's rôle in the following words: ''The social atmosphere must be one which is favorable for growth. The teacher's part is not to take refuge in a didactic method to safeguard the children from the overstimulation of too close contacts, but first to give the right of way to a general sort of group play which any individual may enter or leave at will. Next, to let each child follow his own experimental interest in his fellows, as he proves himself able to keep himself in hand''; and, as long as his social activities do not interfere with the welfare of the group, ''the teacher attempts to safeguard the social environment for each child until he arrives at a stage in which he can pursue his investigations with profit to himself and without detriment to his fellows.''[6]

Current practice tends toward having the groups for the youngest children smaller than for the older age-levels. Johnson points out that in a nursery group, especially one in which the age-range is large, very young children must be safeguarded against too close contacts. ''Children are too adaptable. They conform so readily to almost any condition that is presented to them that its effect upon development is not easily observable. . . . So older

[5] Dewey (5), pp. 16 f.
[6] Johnson (19), p. 100.

children as well as babies must be protected from a program that makes social demands upon them beyond their capacity for making that experience an integrated part of their maturing powers.''[7] Yet, Johnson continues, ''all this emphasis upon social immaturity of children does not alter the fact that the opportunity offered the nursery-school child for experience in playing and living with other children is one of the most valuable that we can give him.''[8]

IV. The Relation of Early Social Development to Later Social Behavior

The advantages of the whole nursery-school and kindergarten situation are seen in these examples where the child makes an adjustment in a group of his own age-level—an adjustment that is guided, but not forced, by an adult, and which is giving him practice in desirable social modes of response. For, as Anderson (14) has pointed out:

> If the daily adjustments of the child to other persons were fractionated, two children might be found, one of whom has been presented with one hundred specific social adjustment situations in a day and reacted to them in one way, whereas the other child may have reacted to these one hundred situations in another way. In the first child, a particular mode of reaction is getting a tremendously greater amount of practice than is another mode of reaction. If we multiply our day by 365 to obtain the year's reaction and multiply this in turn by five or ten or fifteen years as the case may be, we see that the child is presented with an appalling number of specific social situations, a number running up into tens and hundreds of thousands. If certain modes of reaction become fixed early as modes of meeting situations, the child who develops the particular mode of response gets an unbelievable amount of practice.

It is probable that early fixed undesirable social attitudes may continue, unrecognized and uncorrected by adults, for many years. Being uncorrected, they may set the trend of the whole personality. However, as Judd (10) points out, this does mean that they cannot be affected later by other experiences. Mature social and ethical considerations are highly complex. Experiences occurring over periods of many years may contribute to their full development.

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[7] Johnson (19), p. 83.

[8] *Ibid.*, 98 f.

V. Summary

It is important that the social development of the young child have adequate provision, and definite care. Social habits and attitudes of fundamental importance in the development of his personality often have their genesis in the early years.

Considering the great influences of social experiences and the high modifiability of the child's nature, further educational research in this field may bring out facts of profound significance to educational procedure.

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CHAPTER XII

PROVISION FOR INDIVIDUAL DIFFERENCES

A. SPECIAL ADJUSTMENTS WITHIN THE PRESCHOOL GROUP[1]

I. Importance of Individual Provisions

The aim of the nursery school and the kindergarten is to provide for the child those opportunities for growth and development which will permit him to develop his capacities fully.

Besides general provision for all, however, education must also make special provision for those individuals for whom adjustment, in some field or in many fields, is more difficult.

Material, equipment, and supplies are important and necessary for education; still more important is the personal environment with which the child is surrounded—the methods and relationships maintained for the child by the adult.

Upon these methods and relationships depends largely the child's ability to adjust. Certain uniform methods may fit the average of the group; individual methods alone will meet the need of special children. The ability of the teacher to be flexible in her methods and to adapt techniques to the needs of individual children determines the true value of her educational procedure.

II. Opportunities Offered in the Preschool Group

The success with which many individual problems have been worked out in nursery schools and in kindergartens is evident. While experimental study of the factors and methods involved in these adjustments is not far advanced, some of the obvious factors may be mentioned here.

1. Physical Health

There are several ways in which attendance at a preschool group may help the child who has some special physical need. The

[1] This section is based upon the material submitted by Abigail A. Eliot, The Nursery Training School of Boston; Leslie R. Marston, Greenville College, Illinois; the staff of the Smith College Experimental Schools; and Lovisa Wagoner, Vassar College.

school may work indirectly, through the parent, in building up the undernourished child, in suggesting more sunlight for the child of lowered resistance, in interpreting many of the special recommendations of the physician to the parents and encouraging them in trying to carry out these recommendations. Directly, the school may aid the child in certain positive health habits, upon the physician's advice. To handle major physical difficulties, however, is not the function of the average nursery school or kindergarten, unless it has special equipment for medical service.

2. Adjustment in Attitudes and Behavior

In the personality of the individual child, which includes the sum total of all his capacities, habits, and attitudes, the life of the preschool group may have direct constructive influence.

a. The Establishment of Routine Habits. The child who has many food idiosyncrasies or who is resistant when it is time for sleep often gains signally when he has been with the group for a short period. The regular régime of the school, the presence of other children who carry out the routine as a matter of course, the less emotional attitude of the teacher, each has a strong influence. The child learns to adjust his health habits, and the parent is encouraged to adopt better methods by seeing concrete evidence that it can be done.

b. The Building Up of Habits of Self-Assistance. Among preschool groups there is a tendency to encourage the child to do for himself in so far as he is ready. This does not imply urging or any encouragement in activities beyond the child's level of maturity, to attempt which might fatigue or confuse him. It means, rather, that to the degree that self-reliance is possible, there are many satisfactions in its attainment. The child whose parents have waited on him to a marked degree, who seeks to gain his desires by whining, crying, or other immature methods, often develops a much fuller use of his own capacities in the more independent *milieu* of the preschool group.

c. The Ability to Adjust to Other Persons. Both the aggressive and the timid child frequently profit by group play. Marston writes that although definite experimental evidence is lacking, "among common behavior problems where attendance at preschool

has been of significant constructive help are problems arising from extreme introversion and extroversion.''[2]

''Preschool attendance seems definitely to aid in establishing channels of extroversion, especially in social directions in cases of extreme timidity, shyness, and general inhibition of energy discharge. Also, extreme extroversion is corrected by the regulatory influences of the preschool group and the preschool regimen . . . not so much by direct teacher interference as by group stimulation and group control.'' It is also indicated that personal success in the preschool is achieved in part by adjustment to the group, whereas in the home, the child's success frequently is attained by domination over certain adults.

Destructiveness, displays of temper, too much or too little self-assertion, lack of knowledge of how to play with other children, unwillingness to meet the unfamiliar, are other types of problems which may be met constructively by opportunity for group life. The case studies of Woolley, referred to in the chapter on social development, indicate the way attendance in the nursery school has aided individual children.

III. Methods in Individual Adjustments

After careful analysis of the preschool and home situation to insure understanding of the whole problem, what methods are there which may well be used with young children in aiding individual adjustments?

While methods will differ with differing situations, there are some general attitudes which have been found especially beneficial. Among these are the following:

1. Emphasizing success either in accomplishment or in self-control, physical or emotional
2. Definite guiding of the factors of the situation in order that the child may attain success
3. Creating opportunities for the exercise of those aspects of behavior which need especial emphasis in development
4. Changing unfavorable grouping among children by some regrouping (to the child this change being apparently incidental to the activities at hand)
5. Providing an orderly environment, free from confusion, over-interference, or oversuggestion

[2] Marston, L. R. Manuscript submitted for use in this Yearbook.

6. Encouraging freedom of choices (although for young children these choices may well be very simple)
7. Quiet insistence upon the fulfillment of a necessary condition before passing to a new interest
8. Drawing out and clarifying the opinion of the group to aid the individual child
9. Allowing the child to meet many situations suitable to his experience and maturity, giving him time to adjust himself, without undue adult interference
10. Ignoring that behavior of the child which is chiefly an attempt to gain attention
11. Providing opportunity for the working out of individual purposes and interests
12. Helping the child to feel that the best is expected of him, and that his presence is welcomed by the group

In spite of the efforts of the teachers and parents to utilize the foregoing generalizations, in some instances problems will arise which require intensive study and the application of special techniques for their solution. It is in the field of mental hygiene that we may expect to find much that will be of value in dealing with these more obscure situations.

B. PSYCHIATRIC METHODS AND TECHNIQUE FOR MEETING MENTAL HYGIENE PROBLEMS

I. Problems

In broad definition the mental hygiene problems of the preschool age are not particularly different than those of any other age-group. Two general types of mental hygiene problems may be recognized: (1) those in which failures in development or in social adaptation are dependent upon distinct types of mental disorders (such as feeble-mindedness, epilepsy, and organic reductions in reactive or inhibitory capacities) and (2) those types of behavior which in one way or another disturb the persons with whom the child lives to the extent that they recognize the child as a problem. In general, recognition of the latter group depends upon the fact that some item in behavior disturbs the peace, comfort, or pride of the parents. While some such situations are unquestionably very serious, there are other problems, particularly in the personality field, which are ordinarily passed over by the parent as being not of importance. This is especially true of the very quiet, submissive, extremely 'good' child who gives his parents no worry and concern. Never-

theless, this personality mechanism is pernicious, because the child comes to live in an inner world from which a great deal of reality and socializing contact is eliminated, and the results of this may, in the end, be very serious.

1. Problems Dependent on Distinct Types of Mental Disorders

While any discussion of mental hygiene problems in children of the preschool age should logically include the problems stated in the first group, they are omitted after this one short paragraph. The psychiatric problem here lies in recognizing the condition, and, when the diagnosis is made, in providing proper treatment, proper education, and careful work with the parents to induce them to accept the limitations imposed by the conditions found and to prepare them to deal intelligently with the situation over a long period of time. There is no question that the way in which these children are managed may be a powerful influence in determining their behavior. Hence the need for work with parents, the provision of special kinds of education, and varied social machinery for dealing with the problems presented.

2. Problems Related to Personality and Environmental Factors

We turn, therefore, to the second group of problems in which four major types need to be considered.

a. Habits. The first of these is habit-formation, particularly the formation of those habits that are distressing to others. Here would be included thumb-sucking, enuresis beyond the usual age, temper tantrums, finicky food habits, sleep disturbances, speech disturbances, nail biting, masturbation (an activity which is, we think, improperly called masturbation is very common in children of the preschool age), stubbornness, or negativism (a common type of faulty habit-formation), and oversubmissiveness.

b. Reactions. The second major type of problem includes personality reactions, chiefly in the form of emotional reactions manifested in such degree that they may be regarded as excessive. Here we place seclusiveness, timidity, sensitiveness, fears, excessive imagination, fanciful lying, excessive unhappiness and crying, selfishness, restlessness and over-activity, sullenness, revengefulness, excessive irritability (not in the form of temper tantrums), etc.

c. Social Relations. The third type comprises difficulties in social relationships, such as fighting, teasing, bullying, impudence, disobedience, showing-off behavior, lying, stealing, cruelty, inability to get along with other children and unpopularity. All these are traits in behavior which the preschool child, as well as the older child, frequently shows.

d. Problems in Personality Integration. The fourth type of problems lies in the field of the development of emotions and their integrations in personality, since disturbances in the ordinary development of emotional reactions have a profound influence on the future success and happiness of the individual.

II. Aims in Mental Hygiene

The ends for which we strive seem to be the success and happiness of the individual now and in the future. Without going into any very great detail it might be pointed out that 'success' implies the establishment and maintenance of satisfactory social, economic, and vocational adjustments—satisfying, that is, to the individual and not in conflict with the social order. By 'happiness' is implied a type of life which permits the individual the greatest feeling of security and joy of living and the maintenance of stable conditions of mental and physical health. Since success in relationships with others and the social order at large may enter very definitely into the problem of the securing of personal happiness, the two things seem to be inextricably linked. There is here no Utopian idea. The individual can realize success only within the limitations imposed upon him by his innate make-up and the kind of training and life experiences which he encounters. There is no notion that the same kind of success is possible or desirable for different individuals. It is recognized that persons find and express happiness in different ways. Perhaps all of this could be expressed by saying that what we are striving for is an individual, so well-adjusted personally, socially, and vocationally that he may achieve the greatest success and happiness of which he is capable.

III. Preventive Work

Much has been said and written about the problem of training people for parenthood. Much of it, as emphasized at length else-

where, proceeds on the basis of making certain sorts of factual studies and presenting this material to parents with an appeal to their intelligence as a guide to what they ought to do. This seems a most inadequate kind of program. The relationships that exist between child and parent are, after all, primarily emotional, and it is only when we get past these very strong and deep emotional bonds that we come to a point where intelligence enters into the situation.

1. Parental Training

First of all, we have to make parents conscious of the emotional bonds that exist between them and their children and of some of the defects in their own emotional reactions toward their children. Once this has been done, intelligence may be turned upon the problem; but until the limitations imposed in one way or another upon the child by the parents are recognized by the latter in terms of their own emotional rejections or fixations, the chance of securing a satisfactory kind of handling, practically speaking, is nil.

The major need, so far as the parent-child relationship is concerned, remains, as always, that the parent actually shall have affection for the child and express it in such ways that the child understands, while at the same time he views the activities of the child with a sense of humor and a certain detached intelligence which helps to make of the child a free agent, although with satisfactory types of emotional bonds.

2. Adequate Provision for Meeting the Child's Needs

A second major type of effort in the preventive program is that there be adequate provision for meeting the needs of the child's developing intelligence, emotions, and physique. We deal here with such problems as the proper kind and adequate amount of recreation, and of contacts with adults and children other than those in the family; a wise and unobtrusive surveillance of the child's activities so that they do not become dangerous to himself or too disturbing to others; recognition of the point that play is the child's work and that through the doing of things, whether these be abstract or concrete, but particularly through the development of the large muscle masses, the best kind of training is provided. Throughout all this there must be a recognition of the

child's interests and of the satisfactions that the child obtains from different sorts of activities, rather than an imposition by the parent or teacher of things that would satisfy and interest these adults but have no necessary relationships to the child's interests and satisfactions.

Even the general statement of such a program is not easy; to lay it out in detail becomes almost impossible because of the variations in children's interests and satisfactions. Nevertheless, approaches can be, and have been, made in the nursery school and elsewhere by the development of various forms of recreation and useful activity. In this connection one should never make the mistake of destroying pleasure in useful activity by thinking of it in terms of its being 'unpleasant work.'

3. The Conditioning of Responses

In all of life, and particularly through this first period, responses are constantly being conditioned by the association of chance events at the time of the response. Hence the need for careful study always of the meaning of any type of behavior. In fact, the fundamental question to be asked about any behavior, whether it be regarded as healthy or unhealthy and normal or abnormal, is: What is the meaning of this behavior? What need or urge does it satisfy in the child? Has it any possible future unpleasant significance? Only through answering these questions can we determine whether a given bit of behavior is to be encouraged or discouraged. The most important element in the preventive program has to do with parents, their attitudes and their relationships with their children. We think it is fair to say, so far as behavior in terms of social relationships go, that the parents are the most important elements in its construction.

IV. Reconstructive Methods

1. Diagnosis

a. Study of Entire Situation. A reconstructive program hinges around the treatment of behavior and personality difficulties that arise in the child. The first element in any such program is the proper diagnosis of the causes of the behavior. The experience of the last few years has taught us a great deal. It is not enough merely to study the child as a physical or mental organism and to

make a diagnosis of his difficulties phrased in ordinary psychiatric or physical terms. To be sure, we must know the whole organism as completely as may be possible from both the physical and mental standpoints. When we do so know the individual, we become aware of the fact that there are many parts of the organism which may go astray and that we cannot lump all of these possible changes into some single, convenient pigeonhole. Furthermore, we recognize the point that the individual cannot be separated from his environment. He is constantly receiving stimuli from the environment and is constantly reacting to them. Not only that, but the organism is constantly making its impression upon the environment and thus modifying the reactions and stimuli coming therefrom. We have, therefore, to study the entire situation, the individual and all of the things to which he reacts. The most important elements in the environment are precisely those dynamic elements—the persons and their reactions and behavior—to which the child must react in one or another way.

b. Recognition of Limitations in the Organism. Aside from the study of the dynamic ways in which the organism reacts, we must recognize that there are limitations in the individual, in his capacities to respond. Not only is this in general a philosophically true statement; but there are many particular ways in which the organism may be limited, as in the case of intellectual inferiority, physical inferiority, some chronic type of disease, etc. In determining, then, the possibilities of a treatment program, these factors limiting the capacity of the individual to respond must be well known and completely evaluated in terms of their present and future significance.

Diagnosis, then, becomes a matter of study of the people with whom the child lives, of his relationships to them, of his relationships to other people, to all types of tasks he may have to face, and of himself as a physical, intellectual, and emotional organism. Only on such a well-rounded study is there a possibility of erecting an adequate program for treatment.

2. Treatment of the Child Directly

When we come to treatment, we have to recognize that there are two major points to which our treatment program will be directed. There is, first of all, the child himself. Here a great many

different methods have been worked out. Following is a brief résumé of some of these:

a. Adler's Method. What may well be called the Adlerian method depends upon the recognition of various mechanisms producing feelings of inferiority and compensatory behavior in the attempt to dominate a given situation. The chief element in the method of treatment appears to be giving to the child a sense of his own importance and worthwhileness and at the same time providing him with an individual who is sympathetic and expects from him the best in the way of behavior. In certain of Adler's work, as, for example, work carried on in the public schools in Vienna, not only the influence of the teacher but also the influence of the group of pupils who are in the class is brought to bear on these problems of behavior. It is a most dramatic experience to sit through a session in which thirteen-year-old boys are discussing the behavior of themselves and other people, explaining in psychological terms and setting up ways in which the behavior could be modified so that it would be socially acceptable and at the same time personally satisfying.[3]

b. Psychoanalytic Methods. To some extent, in the interpretation and treatment of every behavior problem, the knowledge of mental mechanisms gained from psychoanalysis is of importance in understanding what is going on. On the other hand, as a therapeutic technique psychoanalysis is applicable to only a limited group of cases, primarily in children older than those we are discussing, and only then on the basis of a definite symptomatology for which psychoanalysis is the indicated method of attack, whether the symptoms occur in children or in adults. Thus hysteria, or hysterical symptoms, would lead to the use of such therapy.[4]

c. Physical Therapy. Many cases present some type of problem in physical therapy. Then the therapy should certainly be given. There are times, however, when it is assumed that the physical therapeutic problem alone accounts for the behavior diffi-

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[3] A more complete discussion of the methods used by Adler will be found in Adler, A. *The Practice and Theory of Individual Psychology,* pp. 59-77, 339-350.

[4] A more complete discussion of the method used by the psychoanalytic school in work with children is described in Freud, Anna. *The Technique of Child Analysis.* New York: Nervous and Mental Disease Publishing Company, 1927-28, pp. iv, 59.

culties. We have never yet seen a case in which there was not also some psychological mechanism connected with the physical difficulties. In fact, physical difficulties operate chiefly, so far as behavior is concerned, by determining (1) certain limitations in capacity to react, which (2) lead to oversolicitation and the development of a pernicious situation in which the child is the center of attention, and (3) certain conflicts over differences between the activities permitted the child and those in which other children may engage. In our experience the latter two mechanisms are by all odds the most important, and they must be met as well as the physical problem.

d. Persuasion and Direct Contact. Some methods are described as the "methods of persuasion and direct contact." It should be pointed out that in general whatever effects are achieved in direct contact with the child are achieved in direct proportion to the emotional rapport between the psychiatrist and the individual. This emotional rapport has been called by the psychoanalyst the "transfer." What it seems to amount to in the case of children is something like this. The therapist becomes a kind of ideal or the repository of ideals which the child hopes to reach. From the emotional standpoint the child's satisfaction is achieved by inducing emotional responses in this individual (father or mother substitute). This is true no matter which of the methods previously described may be under discussion. The Adlerian method depends definitely upon the development of this transfer and the setting up in the child's emotional life of a satisfactory emotional relationship with the therapist. In fact, Aichorn, one of the leading Austrians, in dealing with behavior problems in children, describes his method as one of attempting to understand intuitively what is going on and then making a conscious use of the transfer in treatment.[5]

e. The Intellectual Approach. There must be added to this developed emotional transfer situation an intellectual approach to the problem as well. This intellectual approach involves analyzing the meaning of the child's behavior, finding out what satisfaction he is striving for, and then evolving, either with the child or otherwise, other more acceptable means of reacting which will still permit the

[5] See Cassity, J. H. "The importance of transfer in child hygiene." *Med. J. and Rec.*, 125: 1927, 611-613.

emotional satisfaction to be obtained. With older children this analysis is often done directly with the child, throwing the responsibility back upon him, once he has clearly understood the real meaning of his behavior. It is not necessary to emphasize that "analysis" is used here in the ordinary sense and not in the sense of psychoanalysis.[6]

2. Treatment Through Changing the Environment

In all cases of behavior disturbances the problem can not be solved and treatment be finally satisfactory without taking into consideration the problems in the environment which in one or another way, usually as stimuli, are related to the behavior shown. This indirect approach to problems of the child should never be neglected in the treatment of any situation, no matter how much work may be done directly with the child himself.

a. Parental Attitudes. In the preschool age we have primarily to do with the problems of the home. Many points arise. The attitude of the parents toward their children and expectations for them; their ideas of discipline; their knowledge of what to expect of a child at given ages; the ambitions they have which lead them to push the child in one or another direction; their attitudes towards their own childhood experiences and attempts to eliminate or correct the unpleasant ones in the lives of their children; the emotional bond between the parents; their emotional reactions towards the children in terms of their love, pride, etc.; the fixation of the parent upon the child as a love object substituting for some other love object which has been unsatisfactory; their attempts to revenge themselves upon the child for frustrations in their own lives which they cannot otherwise manage—all these and many other emotionally determined attitudes which may be extremely upsetting in the evolution of the child's patterns of behavior must be kept in mind.

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[6] A sixth method might be mentioned—the "staged show." The child is brought before an audience of parents, relatives, visting physicians, medical students, nurses, and others interested in the clinic. Here the child's behavior is discussed, analysis is made of problems, and remedial plans talked over. A lecture may be given the child. The method seems not to allow for certain factors of shame, feelings of disgrace, from being lectured before others, etc. which experience shows must be avoided if best results are to be secured.

b. Daily Routine of Activities. There is also the question of routine of the household; its system or lack of it; the kind of training to which the child is exposed; the sort of things which he is permitted or encouraged to do and the possible future difficulties which these activities may produce. Many parents, for example, will permit certain sorts of activities while the child is small and then be tremendously upset when the same sort of activities occur when the child is older.

c. Parental Relationships. It is certain that those in the front line trenches can rarely have a clear idea of the whole battle. So it is with parents in their relationships with each other and their children. Being deeply engaged emotionally in one or another way, it is very difficult for them to make a clean-cut, objective analysis of the situation, and it is often extraordinarily difficult for them to change their ways or methods unless guided from the outside. Hence the development of a series of extra-home facilities for dealing with behavior problems when they occur.

d. Utilization of Extra-Home Facilities. For this there are some other reasons—the smaller size of the modern home; grouping together in smaller areas of larger and larger masses of people; the assumption outside the home of the major tasks of producing and distributing the things which are needed to maintain the individual physically; the going out of the mothers to work; the increasing emphasis on money as a medium of exchange; the isolation of the family from its own larger family group. All these have contributed to an increasing need for extra-home facilities; so we have the nursery school, the development of small groups of children who live and play together during certain sections of the day, the development of systematized recreation, and various kinds of clinics studying the physical and mental problems of the children. Present-day thought recognizes that such agencies should be a means for improving home conditions through the education of parents rather than merely agencies to supplement home services. The clinics, whether called habit clinics, child guidance clinics, psychiatric clinics, or whatever, are all concerned with the study of the whole individual and his situation. It is only through this and then through well-defined efforts to utilize the social machinery available and to change the existing patterns and attitudes in homes that we may hope to deal with the problems in

such way that the behavior difficulties and mental difficulties of later ages may be prevented.

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CHAPTER XIII

RECORDS OF YOUNG CHILDREN: A MEANS TO EDUCATION[1]

I. Value of Written Records

Most organizations dealing with preschool children find some sort of record of each child a necessity, since scientific treatment can be based only upon accurate data. The memory of individuals is too inexact, too incomplete, and too personal to be relied upon. Written records are usually compiled of observations and measurements from many sources and thus tend to give an unbiased picture of the child. A written record is cumulative. It preserves an account of the child at one stage of development, so that it can be studied later in the light of further information.

The written record serves a double purpose. Not only does it make possible a more understanding and adequate treatment of the child, but also it offers valuable material in the scientific study of children. Only by pooling data are we able to undertake the careful study of young children. Gradually, by means of careful studies of cumulative records the mass of unproved and contradictory opinions which make up the bulk of present literature on child guidance and child development will give place to accurate and well-founded knowledge about children.

II. Methods Used in Taking the Record

1. Sources

The sources of information for the records depend upon the kind of information wanted. Reports of particular conditions, of tests and special examinations, and technical information about the child are most reliable when secured from specialists.

Usually the specialists and the parents can bring to light most of the necessary data about the child, but gaps may be filled in from

[1] The Committee is indebted to Dr. Rachel Stutsman, Merrill-Palmer School, for critical suggestions and valuable assistance in the revision of this chapter. Dr. Augusta Bronner, of the Judge Baker Foundation, Boston, has criticized parts of the chapter while in manuscript.

various sources. Churches may have baptismal records when birth records are missing. Church contacts may also yield an appreciable body of knowledge of home environments. Previous school records, hospital, and clinic records are other sources of information.

2. Methods of Recording

a. Physical Examinations. The physical examination of a young child should be done by a physician, preferably by one who has made a special study of children, as he is best fitted to interpret the child's physical state. However, as he cannot examine and record at the same time without diverting the child's interest or prolonging the examination unduly, an assistant is necessary. The assistant records the data on the physical examination blank as they are dictated by the physician during the process of the examination.

The record blank which permits more than a simple check or indication of good, fair, or poor condition suggests the possibilities of elaboration for greater clarity. Plenty of space should follow each item to be noted, so that any peculiar condition may be described in detail. Additional space is desirable for a summary of the general condition, a notation of points which should receive immediate attention or special observations which do not seem to belong under any one heading.

By going over the examination record immediately after the examination, the physician can check for errors and add supplementary information as necessary.

b. Mental Examinations. Records made during the mental examination should be as complete and detailed as possible, so that the data obtained by this means will aid not only in the interpretation of the test score but also in understanding and guiding the child in life-situations. This descriptive record is possible, of course, only for individual examinations. For preschool children the only practical test procedure so far devised is the individual examination.

The records taken during the mental examination vary greatly with the individual examiner. Some examiners are content to check the items passed or failed, summarizing this checking in terms of mental age, intelligence quotient, or percentile rank. For

most purposes this method is short-sighted; it is of relatively little value as compared with the record made by a more observing and conscientious examiner.

Frequently, the small space allowed for notes on the record sheet discourages supplementary observations. It is possible in such cases to record additional notes on another sheet of paper and thus avoid losing much that is significant and necessary in the interpretation of the examination.

These records are usually made by the examiner, who manages not only to keep the child busy and happy in the test-situation by judicious administration of the test materials, but also to jot down during it the remarks made by the child, reminders of situations occurring during the examination, and a description of the child, his attitude, and his behavior. This material is necessarily hastily written, since the writing of it must not detract from carrying on the test. It is nearly always advisable, therefore, to have some device by which the examiner reorganizes and interprets the examination data for the permanent record. This may be done by preparing a descriptive account of the examination after the child has left the examining room. Valuable bits of information may be given by an accompanying rating sheet which reminds the examiner of types of information which are of value in sizing up the child. This is more useful if the incidents upon which the ratings are based are given in some detail.

Usually it is necessary that the examiner manage the examination without outside assistance. Some research centers have arranged for a second person to record responses, a method used by Binet in obtaining a detailed picture of the examination. With little children particularly, it is not always conducive to satisfactory rapport to have the third person present in the room. Consequently, sometimes the examining room is so planned that the recorder sits behind a screen or is otherwise concealed and the child is unaware of his presence. This recorder takes full account of the behavior and conversation of the child, leaving the examiner to record the actual test results. Doubtless such a method of recording responses of the child during the mental examination will yield many significant observations which ordinarily escape the examiner who works alone.

c. Daily Observations. Daily records of various aspects of the child's life are usually made by persons in regular contact with him, such as the mother or the nursery-school teacher. The mother's records, which for uniformity seem best made on some sort of printed form, frequently can be written from memory in a few minutes before the child goes off to school in the morning. In this time she can record the essential data about the child from the time of his leaving school the previous afternoon. For special studies the mother or a trained person staying in the home may make longer records in the form of running diaries, brief descriptions of incidents which relate to the study, full records of the child's speech, play activities, social reactions, food habits, or any other phase of his life as desired. Such studies usually are planned to cover a definite time, possibly one or more 24-hour periods, or the child's waking hours for a week.

In most nursery schools certain daily records are part of the regular routine. These are often made for the group; that is, attendance for the group is recorded on one blank, bowel movements in school on a blank tacked to the wall of the bathroom, records of food eaten or returned, and of length of time at the meal are made for each table by the person supervising. In addition, many daily observations are made for special studies of children or of phases of activity similar to those mentioned for the home. In centers where students are working with the children, one child may be assigned to a student for continuous observation over long periods. The student follows the child through all his activities in the school, keeping a running diary of everything he does.

Habit clinics frequently employ the running diary method of observing children left for periods of observation. These are similar to the diaries kept by students and are studied and analyzed when the observation is finished.

The playground offers still another source of daily information about the child. Many times the play director has too many children to direct and too little time to observe individuals to note any but exceptional cases, but when the number of observers is large, daily records of value may be kept. These may be running diaries, written observations of abilities, ratings of performances, records of frequently recurring situations, or other observations according to a set plan.

d. Histories. There is an art, as well as a technique, in the taking of social histories. While the 'historian' needs training to be able to obtain objective facts and accurate data and to bring out salient points, he needs to remember that his purpose is to record a picture of the dynamic, unique life of each child. It is only when the personalities of the child and of the parent are viewed as such that a true picture will be given. The personalities of both the recorder and the parent are involved in the interview, and it becomes a synthesis of the actions and reactions of each.

A parent is not inclined to speak frankly to anyone who shows discordant personal reactions or lack of insight. To be able to put an adult at his ease, to draw out the more important facts in the development of the child, and to discern the significant facts in a wealth of running detail of a little child's activities, as well as to be able to estimate the influence of parental factors which are learned only through indirect conversation—these are abilities not learned quickly; they must be acquired by training and by thoughtful preparation.

Parents frequently impart confidences concerning their children which they do not care to have discussed by others. It is essential that the interviewer hold such confidences with strict professional respect and that the details be discussed only with those who are vitally concerned. Any visits to the home which are made by school authorities are as professional as medical visits and should be regarded in this light.

It is important to make the developmental history as accurate a picture as possible. The recorder's impressions, if written, should be distinctly labelled as such, in order to separate them from the facts as given by the parent.

Special caution is essential in treating data reported by parents. There is an almost universal tendency to present the best picture possible of one's own children and of the home training given them. Therefore, not infrequently certain points of the child's behavior are minimized or magnified, and important factors are not stressed. For purposes of research there is needed a means for obtaining home histories which are as accurate as the treatment of the data necessitates.

The interview may take place at home or in the school, whichever offers the greatest opportunity for obtaining the information

without interruption. The home possesses certain advantages to the interviewer, who may find the answers to many of his questions in the home surroundings, without direct queries.

A trained recorder, whether the home visitor, social case-worker, nutritionist, or psychologist, is probably best qualified to hold the conferences with parents for obtaining histories. Her special training and experience in meeting and talking to others and in drawing out the data which are valuable help to cover as much ground as possible in the allotted time. For the same reasons the trained person is better able to discriminate between pertinent and irrelevant material and to record the history in a manner useful for further study.

To prevent inaccuracies, some data may have to be recorded during the interview, but many persons talk more freely if they do not feel that every word is being taken down. Parents who understand the need for information about themselves and their children usually are quite willing to give it so far as they are able.

Community agencies touching the home may have contributions to make toward the complete histories. Child-caring institutions, hospitals, clinics, and schools occasionally can supply helpful information and are glad to do so to reputable organizations. Frequently the inquiring organization can give valuable data in exchange, thus enriching both records.

Individuals, such as private physicians, teachers, clergymen, and others who have had close contacts with the family, should be approached for information only when absolutely necessary and then with the greatest tact. It is essential to say or do nothing which may impair their relations with the family and to interview them on a strictly professional basis.

3. Kinds of Records

Different investigators have their own preferences for certain kinds of records, and some seem more suited than others for special pieces of work. A brief description of the commonly used records for the study of young children follows.

a. A running diary is often kept as a basis for an all-round study of a child. This is usually written up by one person who is able to watch the child over long periods and to record at the time

as completely as possible whatever the child does or says. Such a record is especially valuable in behavior or personality studies.

b. Interview descriptions are frequently used for recording interviews with parents or others interested in the child from a non-technical point of view or interviews with the child himself. These describe and sum up the content of the interview. As they are written after the interview is over, they are not as detailed as a running diary.

c. Case histories are usually taken by a trained person as a record of what has happened to the child up to the time of the particular study. A blank having the different points to be noted indicated on it with room for some elaboration seems to be the most satisfactory for such a record. This insures the inclusion of the important facts and makes them stand out, while still leaving room for details.

d. An interview outline is preferred by some persons to an interview description. This outline consists of a definite and somewhat detailed list of questions worked out in advance, the answers to which, recorded by the interviewer, provide the desired information.

e. Record blanks on which the information to be obtained is specified are used by some investigators for a large proportion of their records, whether of interviews, examinations, or case histories. These list definite points to be noted and may be devised in such a way that the information obtained can be indicated by checks or by one or two words.

f. Ratings are still briefer records, which, to be of value, must be made with great discrimination. For the person, place, object, or performance to be rated, definite items are noted and a numerical value or some graphic measure is assigned to each one. Such records are used for types of material which cannot easily be measured in any other way. As they are subjective judgments, depending upon the person making them, it is usually valuable to have them repeated by different persons.

g. Scales are records used to organize and evaluate data so that, when the desired information is obtained, a definite measure of the individual can be found. They are usually set up on a specific blank form with the evaluations made in terms of accepted

standards for the group as part of which the individual is being studied.

h. Personality studies usually consist of a combination of records—mental, emotional, social, medical, nutritional, and any others which may influence the child's personality. These are frequently narrative or descriptive in form, summing up the accumulated records to give a picture of the child as a whole.

i. Written observations of particular incidents or particular aspects may be valuable for some purposes. These may be recorded for one child or for a number of children, when such things as enuresis, food habits, or thumb-sucking are under study.

j. The results of tests and examinations are usually recorded on record blanks such as those already mentioned, but in addition to those blanks certain *explanatory notes* may be necessary to clarify or modify some part of the record.

k. Questionnaires may yield helpful information of various sorts. These are similar to the interview-outlines in that definite questions are formulated, but they differ in that they are usually filled out personally by the parent, teacher, doctor, or other individual supplying the information.

l. Daily home and school reports are of value in interpreting behavior from day to day, and, when accumulated, provide useful data on certain phases of the child's life. They are usually very brief and made on small printed forms which require only checks or a few words to give the desired information.

m. A profile of development is evidently desirable as a means of combining different types of data into one summary record which will give a quickly grasped picture of the child as a whole, and of facilitating the comparison of the child with other children. Indices of development have been worked out with varying success for physical growth, mental development, and corresponding fields, but so far no method has been found by which these can be correlated satisfactorily.

III. Organization of Records

The systematic collection of records is highly desirable for any study of child development. Chance or casual observations, while they may throw interesting light on certain phases of the child life,

can never have the same value in measuring progress as records made at definite intervals. Records, tests and examinations of mental, physical, emotional, and social development, when made at specific time intervals, can be dovetailed together with greater ease than when they are made at chance and irregular intervals.

The form in which the data are organized is somewhat a matter of individual preference, but most investigators agree that, in laboratories or institutions where many aspects of the child are studied, a complete set of all the data about the child should be kept in one place. Whether this is in a loose-leaf notebook or in a section of a catalogued file matters little, but the depository of the material should be capable of expansion to make room for records added from time to time. Such a collection should be indexed or tagged well for ready reference. Copies of any part of the records may be kept as desired in the various departments where they may be wanted frequently.

It is important that the records be written legibly, in unambiguous language, and in terms understood by all the persons using the material. Facts and opinions should be differentiated clearly and where long accumulations of highly technical data are essential, summaries of the data should be made in paragraphic or tabular form for convenient use.

IV. Content of the Records

1. Physical Records

a. History. The physical history from the time of conception is the starting point of a complete physical record of the child. Something of the family health history and hereditary traits should be included if possible, with both sides of the family represented. The mother's condition during pregnancy, the birth history, and early feeding and developmental history are part of this record. The age of the child at the appearance of teeth, at the taking of the first steps, and at the first unsupported walking belongs here also.

As food has an important bearing upon the child's physical development, the feeding history may well begin with a brief record of the mother's diet during pregnancy. The ages at which the child was weaned from the breast and from the bottle should be included. The ages at which other foods, such as orange juice, cod liver oil,

vegetables, and eggs, were added to the diet are significant. A brief description of the type of meals served to the child after weaning, with changes or additions made from time to time, is needed. A note of any apparent food allergies or difficulties in feeding may help to explain later physical defects or disturbances.

The physical history includes the diseases which the child has had. It is desirable, if possible, to record the ages at which these were contracted, their duration, and any special effects which may have been noted. Tendencies to frequent colds, to digestive disorders or any other disturbances should be mentioned, as should vaccinations, susceptibility tests, or immunizations, with their results.

b. Examinations. This physical history serves as a background to the picture of the child's present physical status as revealed in the physical examination and laboratory tests. Thorough examination of the child with all his clothing removed, made by a competent physician, is necessary for a complete record. As the process of the examination and the points which should be noted are described in Chapter VI of Part II, they need not be repeated here. The laboratory tests and anthropometric measurements which are of value in supplementing the physical examination and in comparing the child with others of his age or stage of development are also given in the same section.

c. Daily Records. The records of periodic physical examinations, tests, and measurements show the degree of progress the child is making. Daily records made at school or at home can increase the usefulness of the less frequently made records. These do not attempt the detail of a physical examination, but supply relevant bits of information which help in understanding the child's progress. The daily school records, made by the nursery-school teacher, may contain such items as reasons for absences, length of nap, bowel movements in school, food eaten in school, and records of any physical aspect of the child that comes to her attention. While these may seem complicated, properly organized blanks kept for the group simplify the recording and the information concerning each child may be transferred to his individual record at another time.

The daily records from the home, valuable to the parents in making them realize factors of special importance in their child's

development, provide helpful information in understanding the child's behavior and condition in school from day to day as well as his general growth trends over longer periods. The hours of sleep, whether quiet or restless, urinations during the night, bowel movements, the food eaten for breakfast and supper, all are useful data for a comprehensive understanding of the child. Notes of upsets in the child's regular routine, prolonged crying spells, food between meals, colds, or emotional disturbances at home are also helpful. That such data are attainable has been proved in a number of centers for child study where parents of the nursery-school children send daily reports giving this information briefly as part of their coöperation with the school.

Daily home and school reports of all kinds may be summed up for any particular child at the end of each day or at the end of a week or month, so as to be viewed in sequence.

d. Special Reports. Besides the daily reports of what food the child eats, occasional reports of how much he eats are essential for determining his actual food intake. Such records, made daily over periods of a week, can be useful additions to the physical record. To show seasonal variations in the diet they should be made several times during the year. One of these records should be made by the mother during a vacation period when the child has all his meals at home, noting the kinds of foods and measuring the amounts served to him with standard measuring cups and spoons. On this record the amounts of second servings or food between meals should be added and any food served to the child but not eaten should be measured and recorded.

Other reports or data to be included in the physical record may be special studies made of some phase of the child's physical life, such as sleep, activity, food intake, elimination, colds, etc.

2. Mental Records

The history of the child's past development should contain a varied and complete picture of the child. This will include information about the mental traits of the parents and of other members of the family, their education, and attainments. It will cover the developmental data regarding the child, including habit training of all types. Data on various aspects of the child's emotional life, his attitude toward the family, and their attitude toward him,

along with as many data as possible concerning the development in the child of self-reliance, concentration, initiative, imagination, and the like, are also desirable. It must not be forgotten that the medical, social, and nutritional history are quite fundamental in any attempt to appraise the mental attainments of the child and their significance. The hours of sleep, the method used in training for the toilet, the amount and kinds of illness, the child's attitude toward food, the effects of changes in environment, all should be considered in forming an integral picture of the child.

Such data are usually obtained chiefly from parents through interviews, home visits, home reports, and the like. Baby books or mothers' diaries are occasionally found helpful sources of information, especially as reminders to the mother. While many of these data are less reliable than those secured by trained observers, they are worth securing.

The questionnaire of Simon (39) is an attempt to guide parents in making more scientific notes. "The Baby's Record" of Baldwin (33) is a further guide. The Monmouth County, New Jersey, Organization for Social Service has record booklets in which parents are asked to keep full records of progress. There is an increasing interest in the development of methods of helping parents observe their own children, and as these methods become more widely used, it will be possible to obtain more complete and more accurate data in regard to the child's past development.

The mental examination offers a fruitful source of information concerning the mental development of the child, although it may be of little real value unless interpreted in the light of other information. On the mental test sheet the responses of the child should be recorded in full, so that his reactions can be compared with those of other children. The quantitative responses should be only a small part of the material on the mental test. There should be a descriptive account of the child's reaction during the period of observation including his behavior, coöperation, interest, perseverance, physical condition, conversational tendencies and the like. Ratings on personality tendencies shown during the testing are helpful.

Some preschool centers have found it useful to have a daily record blank on which the teacher notes, as part of her morning's routine, any unusual conditions which make it unwise to attempt

to examine the child that day, like return to school after a long illness, a severe crying period at home or at school, or an unusual disturbance in the child's routine. This information should aid in making the examination results more uniform and comparable for the various children. Additional tests of sensory development and sensory acuity should be made either by the physician or the psychologist to supply desirable information too often neglected. The records should contain observations on habit development. These can be made in terms of descriptive statements, outline guides, ratings, or inventories.

Van Alstyne and Hill[2] are developing a guide for studying the eating and bathroom habit learnings in the nursery school. The recent study by Bott, Blatz, Chant, and Bott[3] is a valuable contribution in this field. The authors have attempted to formulate from the observed facts of practice some standards of actual behavior. Without more accurate information concerning norms of behavior, deviations in the individual can be sensed but can scarcely be evaluated adequately. Other centers are working on this problem of obtaining adequate standards and methods of observation.

One approach for getting a picture of the child's behavior in the nursery school is systematic and controlled observation. There are now being developed in various centers charts and forms to record and to analyze the child's behavior throughout his day. Some of these sample his activity at stated hours during the day. It has been found that, with the very young child especially, these periods of observation must be long enough to give a fairly representative cross section of his interests and characteristic modes of response.

Rogers[4] and Andrus[5] have introduced the idea of inventories for observation of habit development in young children. These in-

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[2] Van Alstyne, D., and Hill, A. B. *Eating and Bathroom Habit Learnings in the Nursery School.* New York: Columbia University, Teachers College. (Study in Progress.)

[3] Bott, E. A., Blatz, W. E., Chant, W., and Bott, H. "Observation and training of fundamental habits in young children." *Genetic Psych. Monog.,* 4: 1928, 66 pp.

[4] Rogers, A. L. *A Tentative Inventory of Habits of Children Four to Six.* New York: Columbia University, Teach. Coll. Bull. Series 14, No. 4: 1922. 19 pp.

[5] Andrus, R. *A Tentative Inventory of the Habits of Children from Two to Four Years of Age.* New York: Columbia University, Teach. Coll. Contrib. to Educ. No. 160: 1924. 50 pp.

ventories contain reference not only to the development of motor skills and language but to many aspects of personality development. Methods have been developed by some centers for daily reports of behavior on the individual children by the nursery-school teacher. While such records require a great amount of work, they have undoubted value from the point of view of rounding out and unifying the child's record. Such systematic note-taking is a helpful means of accumulating information which so often escapes the record because of its obvious and daily occurrence, and thus aids in making the record of the child a true picture of his everyday life, with the events as they happen to him, no matter how trivial, forming the background for this picture.

In order to know how the aspects of behavior are affected by the attitudes and personality tendencies of the child, it is helpful to have as complete as possible a picture of the personality and character of the child. Few tests are available which aid much in this problem. Any observations which can be made are helpful. The use of ratings is one of the most common methods of getting information about the child's personality. Rating scales for this purpose have been devised by several different investigators. The Blanton chart[6] is a graphic scale for use in rating preschool children in twelve groups of behavior traits. The Marston scale for rating extrovert and introvert behavior[7] is also adapted to the preschool age. Bridges[8] has developed a scale for preschool character rating which is expressed in terms ordinarily used by the nursery-school teachers in describing the child's personality. Berne[9] in measuring children's social attitudes has developed a rating scale for use with preschool children. Other methods of rating are being developed in various centers. As these become subject to more refined methods of analysis, their validity and usefulness will increase.

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[6] Blanton, S. "The use of the behavior charts in the preschool and kindergarten clinics." *Amer. J. Psychiat.*, 5: 1925-26, 615-623.

[7] Marston, L. R. *The Emotions of Young Children.* Iowa City, State University of Iowa, Studies in Child Welfare (No. 3), 1925. 99 pp.

[8] Bridges, K. M. B. "A preschool character rating chart." Psych. Clinic, 17: 1928, 61-72.

[9] Berne, E. V. C. *An Experimental Investigation of Social Behavior Patterns in Young Children.* Ph.D. Dissertation. Iowa City: Iowa State Univ. of Iowa, July, 1928. 140 pp.

3. Social Records

On any attempt at an adequate record the social development of the child must not be slighted. This should contain a history of the opportunity which the child has had for play with others of his own age and with older or younger children; it should include his attitude toward the other members of the family and the servants, and indicate how the organization of his home affects his social development.

The child's social life in the school—a record of his adjustment to other children, his friendships, choice of playmates, interests, and dislikes should not be neglected. The record should be so kept that it will show the progress of his social development, the increase in his interests in the group, and his ability to get along with other persons.

The use of tests to gauge social development is not extensive at present, but, since it is possible to plan situations and so to control them that the reactions of the children observed will be comparable, more material on this aspect will undoubtedly develop within the next few years.

Gesell has provided many such situations and has developed norms of personal-social behavior which deal with the child's reaction to persons, his personal habits, and play behavior. Marston has four experimental situations to measure the child's degree of extroversion as shown in social resistance to a stranger, his compliance to a request to perform a difficult task, his reaction to a novel environment, and his self-assertion. Berne has a series of situations through which to measure certain social attitudes of preschool children.

Systematic and controlled observation of the child is frequently the means of recording information about the child's social development. Special observations on particular phases of behavior are sometimes in order. The problems or situations which arise need more information than that supplied by routine observations. This extra emphasis gives the additional data which frequently throw light on the significance of the behavior studied.

4. Environmental Records

A thorough description of the home of the child and of the various aspects of his home environment is an essential part of any

well-kept record. In addition to the previously mentioned data to be obtained about the home, facts about the home equipment and furnishings, the amount of light, air, play space, sleeping arrangements, and similar topics will afford a better idea of the environmental background of the child.

Rating scales have been devised for evaluating homes,[10] but primarily from other points of view than that of the suitability for preschool children. These scales, however, offer suggestions as to methods which could profitably be applied to the obtaining of more adequate evaluations of the child's home environment than are now available.

5. Educational Records

a. In Home and School. The educational program for the child will rest upon the combined knowledge gained from all these various sources. The physical, mental, and social aspects of the child's development in turn need rounding out by means of information concerning his education, past and present. For adequate treatment of the child it is necessary to know what educational background the home has to offer, what training and schooling the parents have had, how the occupation of the father affects the organization of the home, what language is spoken at home, and what opportunities the home has to offer in language development. The record should include information concerning the position of the child in the family and its educational significance. It should give some idea as to what part the child plays in the family routine, what opportunity is afforded him for sharing in family occupations and learning simple household skills. Has he, for example, been trained to dress himself? Did he have a nurse and what influence did she exert on his development? Does the mother do all of the work? How much time is she able to spend with the child?

The type of educational equipment afforded by the home, the number and types of play materials, whether too many or too few, how adequate and suitable, the play space, indoors and out, all add to this picture of the child's life. The regularity of the home

[10] A typical scale is that devised by V. M. Sims and published by the Public School Publishing Company as the "Sims Score Card for Socio-Economic Status." This score card is a development of the earlier Chapman-Sims Socio-Economic Scale. J. D. Heilman has also recently suggested yet another revision of that scale (see *Jour. of Educ. Research,* 18: Sept., 1928, 117-126). —*Editor.*

régime, the reaction of the child to food, to sleep, and the methods of discipline used in securing coöperation are as important to the record from the point of view of his education as they are in the planning of any other aspect of his program.

What opportunities has the child had of visiting other homes? Has he day nursery, hospital or orphanage experience? Has he seen country or sea, farm or mountain? Such information will help the teacher to present new material to these little children in such a way that all his past experiences can be used as a starting point. It would be useless to expect a child who has never been used to sitting down to an orderly meal to conform at once to nursery-school régime or to eat at once food which is evidently new in appearance and taste. It is equally useless, without adequate introduction and pictures, to tell old stories of farmyard animals, like *Henny Penny* and *Little Red Hen,* to children who have no knowledge of a farm. Such information, then, is necessary to the record as will aid in the teaching and prevent misunderstandings and misrepresentations in the mind of the child.

When the child is in the nursery school, various types of records are needed. As far as possible, observations from the point of view of the teacher should be added daily to the record, from the first day of entrance. Gradually there will then be built up a record of the progress which the child is making under the present educational program. The educational record should include information on the child's motor coördination. Can he button or unbutton his clothes? How does he manipulate his wash cloth, towel, spoon, fork, and glass? With what kinds of materials does he choose to work? How frequently does he change from one occupation to another? Notes should be made on types of performances by the child, ideas expressed, and skills developed. This will help in introducing new materials and new methods of using materials. Samples of the child's speech, words, and sentences should be noted. In this way his growth in vocabulary can be followed. Examples should be included of the types of play chosen by the child, in order to record tendencies to lead, to be imaginative or routine. Does he tend to play alone, with many, or with few children?

A daily record of attendance, absences, and the reasons for the absence is necessary for the teacher as well as for the other persons who find the child's record helpful. Valuable knowledge is gained

by close contact between the teacher and the parents. Such information should be recorded in the file.

Weekly and monthly summaries will aid in making the record more accessible and more easily interpreted. The data on the educational development of the child should be tied up closely with every other aspect of his development, so that fundamental trends in the life of the child can be studied and perhaps altered.

b. In the Community. Every neighborhood has a potential educative influence. How shall we know what have been the experiences of the child outside of his own house and in the larger world which immediately surrounds it? An apparently well-cared-for child may be missing many of the educational experiences which any street urchin gets as part of his daily life. A record or note of the child's opportunities for experience outside his home provides a useful check on his outside contacts. We need to know whether children have been on boats, trains, and interurban cars, whether they have seen them or only seen pictures of them. We ought to know whether they sometimes walk along the street, whether they ever go to the grocery, to a neighbor's, or across the street alone. We ought to know what the neighborhood offers, whether there are trees or smokestacks, gardens or the no less thrilling sights and noises of the city. It may make a difference in what he knows and the way he acts. In short, it would be helpful to know what kind of neighborhood a child lives in and how much he has been permitted to have contacts with it.

More obvious educational opportunities afforded by the community are the Sunday school, public parks and playgrounds, the zoo, the art museum, and the children's library. Obviously, it does make a difference whether children have seen the bears and the elephant, whether they have had a chance to meet and be with other children in Sunday school and playground, whether they have had the opportunity to climb the apparatus or to climb trees or, for that matter, to climb the stairs in their own house. Unless we have a record made either by parents or home visitor or both, many of the community influences upon the child's development may be overlooked entirely and, because of this, certain aspects of the child's behavior or development may go unexplained.

V. Use of Records

The nursery school and the kindergarten are sufficiently free from curricular demands to base their practice solely upon the needs of the child. Their experience undoubtedly is leavening the less flexible procedures of the upper grades. It is the more necessary, therefore, that there be definite provision in preschool educational procedures for individual study and measurement. If all children developed in a uniform way, individual measurements would not be essential in determining procedure. It is because each child has unique needs, habits, interests, and potentialities that there must be individual study as a basis for developing educational plans.

The records that have been described can provide an admirable body of information about the individual child by which those interested in his welfare can guide his education and care more intelligently.

1. By the Teacher

A knowledge of the physical, mental, emotional, and social background of the child helps the teacher to approach him in the right way to gain his interests. It tells her what points need emphasis in his education. It aids her in directing his activity, increasing that of the child who attempts too little and regulating that of the child who attempts too much. The teacher who realizes the child's level of intelligence can plan his program to accord better with his abilities. To know something of the child and his home surroundings helps her to deal with behavior problems. It helps her to interpret the child's attendance record correctly, to determine the causes for absence. By no means of least importance is the way this information assists the teacher in making valuable contacts with the parents and in establishing a common understanding of the child.

2. By Physicians, Nurses, and Nutritionists

Physicians, nurses, and nutritionists find the correlated data on many aspects of the child's development of decided value in caring for his physical well-being. With it, the basic causes of chronic pathological conditions may be diagnosed and satisfactory treatment prescribed more readily. It is equally valuable in the

treatment of acute illness, because the child's present health status can be better understood when his physical background, family history and heredity, and his training in health habits are known. Cognizance of the child's mental and emotional make-up is useful in securing his coöperation and interest in physical examinations, in treatment of disease, and in establishing desirable food and health habits. A knowledge of the child's physical background and of his activities is essential in determining his requirements for food, rest, sleep, fluid intake, and the like. Only on a basis of such information can the parents be advised wisely on health matters that concern the child and on the interrelation of the child's physical régime with his social and educational activities that will give the best results.

3. By the Psychologist

Much of the psychologist's interpretation of the child's developmental trends depends upon what has gone on in the child's life previous to his examination. For this reason the more complete the available records of the child's social, mental and physical background, the more accurate the psychologist can be. Information about the family history and heredity and about the opportunities for mental and social development in the child's environment is a valuable guide to the prescribing psychologist. Records of all phases of the child's life are desirable in planning his educational program so that the emphasis will be put in the right places. A knowledge of the events in the child's daily life is an unquestionable aid to the correct interpretation of mental test performances. A study of the child's environment, his family history and heredity, his physical condition and his training, nearly always reveals the causes of behavior problems and suggests methods of treating the child and of approaching the parents to secure their intelligent coöperation.

4. By the Home Visitor

Records which give a well-rounded picture of the developmental life of the child help to guide the home visitor in correlating the information which she receives from the school with that which she obtains on her visits to the home. With a general idea of the child's environment she can make a better approach to the home,

save time by avoiding non-essentials, and with less difficulty establish a friendly relation between herself and the parents. Knowing what information has already been secured, she can decide what further information should be gained from the home, what advice and suggestions should be given to the parents, and what educational program should be undertaken for them.

5. By Parents

By no means of least importance is the use of the records by the child's parents. Technical tests and examinations may need some explanation to parents unfamiliar with the technical terms. However, to some persons a written record to which they can refer carries greater import than a conference in which they are given the same information. Nearly always the records bring out points they had not noticed. By comparison of their child's records with the average, or with those for presumably normal children, the parents can form a better idea as to what changes in the child's program may be desirable. Knowing his physical condition, they can plan a physical régime to meet his needs, and arrange for special care if necessary. An unbiased study of his personality gives a starting point for a definite plan for developing his strength and overcoming any weakness. The records guide the parents in acquiring standards for desirable physical and mental habits and help them to recognize undesirable habits. They also give a knowledge of the child's intelligence-level which shows what reasonably can be expected of him. Such a body of information helps the parents to realize a need for making adjustments in themselves and in their relation to their child so that he can in turn adjust himself to the world about him in the most satisfactory manner.

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CHAPTER XIV

METHODS AND MATERIALS FOR THE EDUCATION OF PARENTS

I. Introductory

Parental education up to the present time has devised no unique methods of procedure in the conduct of its teaching. A large variety of techniques such as are ordinarily employed in college courses and in non-academic discussion groups have been adapted to this particular branch of adult education. The dynamic quality of the material and the immediate and active interest on the part of parents render discussion in parental education work far more live than the rather passive material in many academic courses. There has been some experimentation, and in consequence some reorganization and evaluation of the adapted methods, but there is very little, if any, definite knowledge concerning the values to be derived from the use of specific methods. This discussion will attempt to analyze the various methods being used and indicate their value as far as best practice has shown it.

The methods may be conveniently divided into those methods used in working with parents individually and those used in working with groups or classes of parents.

II. Individual Methods

1. Clinical Methods

The clinic as an agency for educating parents as well as children is discussed in Part I, Chapter VII. The clinic is chiefly and immediately concerned with the solution of pressing problems. Children who are malnourished, who have so-called nervous habits of nail-biting, coughing, picking themselves, who have enuresis, or poor sleep habits, extreme fears, tantrums or sex irregularities—these are but a few of the types of problems that come to the clinic for reëducation. As has been stated,[1] the problem with preschool children is largely even though indirectly a problem of reëducating parents.

[1] See Part I, Chapter III.

Clinical methods consist of a series of thorough examinations of the child and a study of home conditions, followed by consultations with one or both parents. These conferences are supplemented by home visits of the social worker.

a. Values. The values of the clinical method are fourfold. The specialists who are usually available in a clinic, including psychiatrist, psychometrist, physician, nutritionist, and social worker, make it possible to secure a comprehensive picture of the child and a study of the home. They also insure that all factors which contribute to child development will be considered in the diagnosis and treatment, whether they be physical, psychological, or social. In some clinics there is developing very adequate follow-up work through the social worker. But one of the greatest advantages of the clinical method is the personal contact which the staff of the clinic have with parents and child. This direct contact not only insures more adequate information about the case, but also gives opportunity for building a sympathetic understanding and an adaptation of remedial measures to the specific case in hand.

b. Limitations. There are, however, certain limitations of the clinical method. (1) The clinical method is directed to the cure, or at least, the alleviation of immediate situations, so that its function, so far as the parent is concerned, is remedial rather than preventive or educational. (2) Parents, as a rule, have sought the clinic only as a last resort, so that incipient difficulties which lend themselves most readily to reëducation are rarely dealt with there. (3) The large number of specially trained people in the clinic makes its services very expensive unless the work is subsidized and consequently makes for an artificial selection of cases.

2. Consultation Service

Consultation service for parents has developed from the demand of parents, especially mothers, for individual help with specific problems, not extreme enough to warrant resort to a clinic.

Individuals, who by virtue of their training and experience are equipped to act in an advisory capacity to parents in discussing and handling their problems, have offered this service to them usually in conjunction with, or as an outgrowth of, group study.

Recently consultation centers have developed under the direction of one person, either a psychologist, a psychiatrist, a physician,

or some other person who has supplemented his specialized training by work in related fields of child development. There is not the group of specialists as in the clinic, but one person with a broad understanding of child training and parents' needs is the consultant. This is a feasible method because the work is preventive and does not attempt behavior problems except in their incipient stages.

a. Values. Service of this sort is specially helpful in that it is related very closely to the mother's continued education in child guidance. Moreover, where it is a supplement to study-group work (described later in this chapter) the parent's continued attendance at the group insures a continuity of contact with the specialist, who can thus watch the progress and direct the mother's study in such a way that she may be continually benefited by it.

b. Limitations. Consultation service is of course limited to a few, even in connection with group study. However, it seems possible to develop consultation and clinical guidance types of service which would be less expensive than those now in use.

3. School Conferences and Visits

A more informal type of individual education of parents is done through the conferring of parents and teachers at school. The nursery school has developed this as a definite means of parental education. When the parent brings the child to school and when she calls for him to go home, opportunity is given for short discussions. Often the nursery school requires the parents to visit the school regularly and these visits are followed by individual conferences. Some of the more progressive elementary schools have also developed as part of the teacher's work regular conferences with individual parents.

a. Values. When conferences are planned they are not only an aid to improving the methods of the parents with their children but also serve to bring much valuable information concerning the children to the teacher. Through these conferences an exchange of information takes place and a mutual understanding between school and home is established which cannot help but tend towards improvement of the welfare of the children.

b. Limitations. If these contacts between home and school are casual and brief they are not as satisfactory as a planned confer-

ence. Under such conditions the matters discussed are likely to be the immediate difficulties which require quick action rather than matters of policy or questions involving psychological principles which necessitate more frequent and less informal contact with the parent.

4. Correspondence

There is an increasing demand on the part of parents for agencies and individuals who are equipped to help in solving problems through the medium of correspondence. Educational periodicals, organizations devoted to parental education and child welfare, and individuals with training, are besieged in increasing numbers by people who seek this type of help.

The chief value of this service is that it enables people in outlying districts who are not within reach of clinics, libraries, or study groups, to secure needed help.

The limitation of this method is the obvious lack of personal contact with either parent or child; a one-sided picture, and information which is inadequate and largely inferential, circumscribe the usefulness of this service. Wherever possible it must be supplemented at least by reading, and if possible, by attendance either at groups or a clinic.

5. Individual Study

Lastly, some consideration should be given to the individual study and reading which is being done by many parents throughout the United States. Through reading of books, magazines, and pamphlets; through observing children and watching teachers in school; and through attendance at isolated lectures many parents are endeavoring to gain some light on the problems of home and family.

a. Values. The essential value of this method lies in the fact that it gives those who cannot attend study or discussion groups something in the way of parental education. Furthermore, it has the advantage of being based on the interests and needs of the individual parent.

b. Limitations. On the other hand, it has decided limitations. Such individual study is usually unorganized and sporadic. The literature read tends to be just whatever happens to come to hand

rather than that selected on the basis of recognized authority. The individual parent has practically no means of evaluating what he reads nor any means of checking on his understanding and interpretation.

Reading is naturally selective, so that many people read only those things which serve to confirm their preconceived ideas, and only a very few are enabled, through reading, to overcome prejudices. The dearth of authoritative and scientific material in sufficiently simple language limits the helpfulness of individual reading as a means to parental education. The objective point of view, which is essential to a change of procedure, is very difficult to acquire by oneself. Parents who study alone also miss the pooling of experiences which is one of the valuable assets of group discussions and study. Probably one of the most significant limitations of this method is due to the fact that parents need to know not only what should be done but also how to change their own attitudes and their own behavior from one type to another. This is the most difficult part of all parental education. Reading and isolated lectures do not seem to give much help. Only clinical methods or continued group discussion and study seem to change the behavior of adults.

III. Group Methods

The education of parents in groups is the method which is used by most of the parental education agencies discussed in Part I, Chapter X. It has the advantage of reaching more parents than the individual method, is less expensive, and gives an opportunity for the pooling of experiences. Group study of whatever kind has for the most part emphasized preventive, rather than remedial work.

1. Lectures by Specialists

There are several types of lectures. There is the isolated lecture. Its function seems primarily to be to give the public an opportunity to see and hear an outstanding person or to call to the attention of parents certain subject matter that is important for them to know. As a teaching device the lecture has but slight value except in giving publicity to the parental education movement, in stimulating community interest and support, and in show-

ing parents the need for study and improvement of their own methods. Such lectures, too, sometimes result in the organization of a discussion or study group, which serves to continue the interest that has been aroused and to formulate the material into a shape that may be more readily assimilated into parental practice.

Better than the isolated lecture is the series of lectures bound together by a continuity of subject matter as well as audience. Where each lecture in the series has a different speaker there is great need for an organizing chairman who not only plans the program, but attends all meetings, talks over the situation with each speaker before he meets the group, and attempts to integrate and bring together the series of lectures.

It must be remembered, however, that in any lecture course, even where the series is given by one person, the audience is relatively passive. There is no give-and-take between audience and speaker, and but little opportunity for checking the interpretation of the lecture by the individual parents in the audience.

The occasional lecture by recognized authorities has been found most stimulating and valuable in supplementing the work of study groups. When in the course of a discussion or study group there arises a need for the help of a particular specialist to explain or interpret a particular phase of subject matter, the lecture meets a definite need. It will throw light on the subjects under consideration and serve as a basis for discussion at succeeding meetings.

2. Discussion Groups

Discussion groups are developing rapidly because of the inadequacy of the passive-audience method. Sometimes, to be sure, lecturers compromise with their audience by allotting fifteen minutes at the end of the lecture to discussion, but the value of such discussion varies greatly with the audience and the chairman. If the audience is rather homogeneous, if they have similar backgrounds and are all rather definitely interested in the same general problems, the questions which are asked will be likely to be of interest to most of those present. At the same time the chairman needs to hold the audience to the subject under discussion, to hold the speaker to a time-limit, and to protect the audience from garrulous talk and disorganized thinking. When the chairman or lecturer can handle a discussion period with skill, this method can be used in

fairly large groups. Those who do not participate in the discussion may be stimulated and interested by it, and frequently the discussion serves to shed additional light on the speaker's presentation.

Another adaptation of the discussion method, which has been developed with smaller groups, is the half-hour presentation of the subject by a specialist followed by a half-hour discussion. In this type the discussion usually consists of questions asked the speaker. Here, again, there is the difficulty of keeping the questions on the subject which has been presented rather than raising new problems on related subjects which cannot be discussed in a brief time.

These various methods of lecture and discussion are subject to similar limitations. When a group has done little or no previous thinking or reading on a subject, the questions necessarily are disorganized and often superficial. There is always the danger that discussion will be trival, irrelevant, or inopportune, and only a skillful and tactful chairman can manage to sift the salient factors out of rambling questions so that the discussion has value for the entire audience.

A very different type of discussion group, closely related to the study group, is being developed by some agencies. The new subject for discussion is presented towards the close of one meeting. Questions are given out which aim to analyze the problem and to stimulate thought. At the subsequent meeting sub-groups are formed to discuss the various questions during the first half hour. The whole group then comes together and reports are given from the various sub-groups. The leader guides the group in bringing together and integrating their finds to the end that they may be organized into a related whole. The efficacy of such group discussion depends upon the ability of the leader and the experience and training of the group.

3. Study Groups

The study group can be designated as a group of people who attempt to understand the underlying philosophy of family adjustments and the methods of child care by definite study. The study group may make use of any of the methods of the lecture or discussion, but it should also include methods of studying children and of obtaining scientific information which has already been developed. In a study group each member is active; there is no passive audience.

a. Organization. The type of organization which is most feasible will vary according to special conditions and to leadership. Some agencies believe that 25 or 30 members form a good working group, for this number facilitates free interchange of ideas and makes well-rounded discussion possible. On the other hand, other leaders feel that smaller groups are preferable. The size depends somewhat on the training and experience of the leader as well as the qualifications of the group and the objective of study. No group should be larger than can be adequately guided by the leader.

A common interest in the problems under discussion does, however, seem absolutely essential to the healthy life of any group. In order best to develop and sustain the interest of all its members, it is recommended that each group be homogeneous as to general background and education. One way to gain homogeneity is to limit the group to parents who are interested in the same general age-range of childhood. Another good way is to plan the meetings around definite topics which are of interest to parents with children of given ages.

Meetings are held at regular intervals, varying from weekly, or on alternate weeks, to monthly. A longer interval between meetings makes for a loss of continuity. Most agencies now arrange for weekly or bi-weekly meetings. Regular attendance is also urged upon all who join, for frequent absences seriously hamper the development of the work.

b. Planning the Program. The methods and procedures used in various study groups for planning the program have been varied in order that it might be adapted to the needs of various types of parents and to the different local conditions and backgrounds of the communities in which the groups were to function. Nevertheless, certain techniques have evolved as being workable and successful for many different kinds of groups and under widely varying conditions.

First, there is the *textbook method*—a simple method for untrained leaders. A textbook, which is chosen by the group, is used as a guide throughout the course. Sometimes this is supplemented by parallel reading or a lecture by a specialist.

Second, there is the *syllabus method.* The group selects an outline, or syllabus, or series of questions on topics, which has already been prepared. This planned program usually contains a selected

bibliography of references and sometimes directions for observation of children at home, in schools, clinics, etc. This syllabus becomes the guide for the course; it has been found especially helpful for untrained lay leaders. Each member of the group does some reading, thinks through the problems or questions in the syllabus, makes definite observations, and comes to the meeting with a background not only of practical experience, but of thinking, observing, and reading as well. The problem of leadership and discussion becomes much simplified with a group which is thus equipped.

Third, the *individual problem* program is planned on the basis of the actual immediate problems of the members of the group. These are built up into a unified program for the season's work and form the basis for discussion. This method of program-making is used often with the discussion method. It has also worked successfully with parents of limited educational background where little or no reference reading is done.

c. Leadership. In any group of whatever type much depends upon the equipment and preparation of the leader. In groups that have no trained leader one member of the group, who, by virtue of educational background and leadership ability, is better equipped than the others, is chosen to lead the discussions. This lay leader, while she need not be an authority or a specialist in the field, should nevertheless have a keen appreciation and knowledge of the subject matter, and sufficient time and ability to supplement her own experience with some special preparation and training for the work she has undertaken.

With the increase in opportunities for training leaders in this field, professional leaders are becoming more available. Some groups have been organized under professional leadership; others have called upon professional leaders from time to time to supplement their regular work under lay leadership.

d. Objectives. The study or discussion group offers a most effective and practical way of making available to parents the knowledge of child life and education which is at hand, and of testing these contributions through the medium of the parent's own experience. Mothers, and increasingly fathers too, bring to study groups a variety of problems, ranging from seemingly trivial daily irritations to serious behavior difficulties. The group, under the

guidance of its leader, considers these problems in the hope of clarifying and interpreting the fundamental principles of psychology and child behavior which are involved in each, and of helping these parents, not only in meeting the immediate situation, but in becoming progressively better able to understand—even to forestall—problems in the future.

A spirit of group coöperation has been found to be essential to the success of the season's program. The members must be willing to contribute their full share in terms of conscientious reading of assignments and of willingness freely to discuss their problems. Groups and leader must also keep clearly in mind the objectives toward which they are working. These may be briefly stated as (1) to formulate clearly the basic principles of the subject under consideration, (2) to relate these, wherever possible, to other topics previously studied; (3) to stimulate interest in further study and discussion, (4) to encourage an open-minded, searching attitude, (5) to pool experiences and ideas which may be mutually helpful, and (6) to train each member to observe her own children objectively in the light of the principles studied.

IV. Techniques Used with Individual and Group Method

1. Observation of Children

Although parents are with their children so much and observing them daily, they do not always observe them objectively; they do not always see exactly what their children do. To teach parents to observe objectively the behavior of their children has become a definite part of the parental education program. Diary records, specific record cards, charts, and directions are being developed in many centers to aid parents in making observations. When observations are made on a specific type of behavior according to specific directions, members of study groups have splendid objective data upon which to base their discussions—data more valuable and reliable than the haphazard and subjective impressions which mothers gain in their everyday living with their children.

2. Demonstration Teaching

More and more in parental education is the need for demonstration being recognized. An observation of a physical examination or of a mental examination being given to a child will make

the parent realize the necessity for certain preventive or remedial measures in child care. Still more far-reaching is the benefit which a parent gains from seeing an artistic teacher direct the activities of a little child. The nursery school may become for parents a laboratory where each may not only study her child but may study the methods of an expert in dealing with that child. A guidance nursery has been inaugurated at one center for the purpose of demonstrating methods of child care to parents.[2]

3. Participation and Practice of Parents

Closely related to the programs for demonstration are the opportunities being developed for mothers to practice under guidance the principles of child care which they have been studying. The play groups for little children organized by groups of mothers, *e.g.*, the Children's Community in Berkeley described elsewhere, afford an excellent opportunity for such practice. In several nursery schools there is a definite program for participation of mothers in the nursery school under the guidance of the director. Experience in educating students for teaching has shown what an important factor participation and practice under guidance is in developing skill in working with children. It is probably true that this technique will be further developed and more widely used in the education of mothers.

4. Home Visiting

The visiting of the home by the social worker or visiting teacher is usually a part of the individual education of parents. Clinics, schools, and social welfare agencies have found that the home visitor can do much to change home conditions and parental behavior.[3]

V. Materials

The materials which were first used for educating parents were college textbooks. The Child Study Association of America, however, early in its existence began to realize the need for literature and teaching materials which were definitely planned to meet the needs of parents. To-day there is much experimentation with vary-

[2] See the chapter on Nursery Schools in Part I.

[3] For further discussion of the work of the visiting teacher see Part I, Chapter III, and Part II, Chapter XV.

ing types of materials. Much of it is not available; some of it can be secured in mimeographed form; some has been printed because of the insistent demand. Several types of material are being developed. A short discussion of each type follows.

1. Manuals for Leaders

Seven organizations have for distribution a manual for leaders.[4] A manual contains, as a rule, directions for organizing groups, methods of conducting groups, sources of material, and special dangers to be avoided. The directions in the manual vary with the method recommended by the agency. It usually aims to make clear to the lay leader the underlying philosophy of method of the director and to give practical help in the application of this method in leading study groups. A few of the manuals suggest several methods, giving the leader the opportunity to choose the one which she and her group consider most appropriate to their needs.

2. Materials for Guidance and Teaching

Guidance materials have mostly developed directly from experience in working with groups of parents. Very few of these materials are made upon theory. It is one of the encouraging aspects of the whole parental education movement that those who are doing the job are the ones who are developing materials for its guidance. These teaching materials are varied. They contain outlines, questions, directions for observations, record blanks, discussions of subject matter, and bibliographies. Some of the materials contain only one of these items, but most of them contain several in combination. One of the more complete syllabi contains outlines, questions, directions for observations, and selected references. The bibliography varies from a general list of references to a selected list with page references given in each.

Such a variety in guidance materials gives a wide range of possibilities to leaders and indicates a wholesome type of experimentation and freedom from stereotype.

3. Reading Materials

For many years there was a dearth of reading material of value to parents. There still is need for certain types of material. At

[4] See list of organizations distributing material at the end of this chapter.

the meeting of the National Council of Parental Education in 1926, following a discussion of the content and subject matter of parental education, these statements summarizing the opinions of those attending were formulated: (1) There is a need for some agency to make annotated bibliographies of literature suitable for parental education courses, and to gather, evaluate, and select such material. (2) There is a need for machinery to enlist the interest of specialists in the various fields, especially those in physiology and biology, who have the ability to write non-technical articles presenting scientific facts to parents. (3) There is a need for a method of evaluating literature written for parents to determine whether it is serving its purpose. It was suggested that some method parallel to that used in the grade-placement of reading materials for children might be devised.

Through the influence of the leaders in this Council there has been an increase during the past few years of scientific material in readable form.

a. Magazines. There are two periodicals devoted entirely to this movement: *Child Study* and *Children, the Magazine for Parents.* The latter has been of value in disseminating scientific material in simple form to parents. *Child Welfare Magazine* is devoted to the closely related field of the parent-teacher movement. The *Quarterly* of the American Association of University Women devotes a department to this field and both *Progressive Education* and *Childhood Education* have issued special numbers for parents. Besides these periodicals there are several whose general content is of interest to parents, such as *Mental Hygiene* and *Hygeia.* It is noteworthy that during the past few years there has been an increasing number of articles specifically for parents in such magazines as *Harper's, Century,* and *McCall's.*

b. Pamphlets. The need for brief, simple discussions of subject matter has led to the publication of many pamphlets by various agencies during the past few years. Decidedly helpful government bulletins have been published from the Bureau of Education, the Children's Bureau, and the Bureau of Home Economics. The Child Study Association of America and the American Association of University Women have also contributed to this field. Several agencies have also issued valuable offprints from the periodical literature. Similar pamphlets have been published by indi-

viduals and by organizations whose interests are related to the movement.

There is still need for pamphlets dealing with the philosophy of home working, home management, the biological basis of life, the learning of children, sleep habits, and other topics.

c. Books. Books which have been written for parents or which contain material which can readily be used or adapted for parents' study groups continue to appear. Books on nutrition, health and hygiene, psychology, mental hygiene, child development, educational methods, play materials, heredity, sociology of the family, and case studies of children, all have contributed to the education of parents.

Many of the series of books compiled for parents have seemed to serve the purpose of parents studying by themselves without guidance better than that of the study groups under leadership. The books are expensive and as a rule not available to many members of a group. Group leaders have been insistent in their demand for cheap, scientific, up-to-date literature.

Practically every parental education agency directed by a specialist reviews all books before recommending them to parents. One association does this by a committee of its members. Lists of books recommended for parents are issued by several agencies. However, as yet we have developed no objective, scientific method of evaluating books for use in parental education. The accuracy of content can be determined, but less easily the reading difficulty as affected by content, vocabulary, and sequence of materials.

4. Materials for Evaluating Results

Results in the education of parents are difficult to evaluate. To test knowledge is relatively simple; to test attitudes more difficult; to test changes in actual behavior is most difficult of all. There are many informal evidences of the results of teaching parents, and nearly all agencies keep for their own encouragement a file of testimonials. A beginning, however, was made in the scientific evaluation of results of teaching parents by Dr. Gertrude Laws at Monmouth County, New Jersey.[5] This experiment did not attempt directly to record changes in behavior of those who had studied, but tried to obtain insight into changes in both atti-

[5] Laws, Gertrude. *Parent-Child Relationships.* New York: Columbia University, 1927. Pp. 57.

tude and behavior through the opinion of the parent or some one who knew the parent. This is a field where there is need for much experimentation.

VI. Pertinent Questions

Since at present there is no definite means of evaluating results, it is difficult to estimate the relative worth of the various methods used in educating parents. It is more to the point to ask a few pertinent questions:

1. Should it not be recognized that the value of isolated lectures lies mainly in publicity for the movement, and that one specialist speaking five times in succession is better than five specialists each speaking once?
2. Is it not inadvisable to answer clinical questions in the general discussion following lectures to large audiences?
3. Should there not be an increasing emphasis upon continuous study rather than isolated, sporadic interest?
4. Should not parents be taught how to go about solving problems rather than merely be given specific remedies?
5. Is there not the possibility of integrating the various methods now in operation so that group discussion would be supplemented by individual study and conferences with the leader, and by clinical facilities for special problems? Should not parents with children in clinics be referred to study and discussion groups and an effort made through the consultation at the clinic to educate the parent to the need for continuous study under guidance?

VII. Conclusions

One of the greatest dangers of the parental education movement which has resulted from its sudden and energetic stimulation has been the tendency to plunge ahead in a pathless field without a clear idea of the scope or limitations. The area of parental education is large. Progress will be hindered and valuable energy dissipated unless there is an effort to make more systematic, concentrated attacks upon its various problems. Parental education should be wary on the other hand of both standardization and specialization which tend to cramp its functions or limit its outlook.

The emphasis on the child and his relation to the parent has for the time being somewhat set aside a consideration of the parent as a person. Because the "problem child" is a dramatic individual and the events of his life make up an exciting plot, he too often

becomes the peg on which to hang the pet theories of the lay mind. A less spectacular consideration of childhood in its relation to family life and a shifting of the child as a center to the home and the family would be a wholesome change in the present situation.

It is obvious that parental education cannot be taught in a single course or even in a group of courses. Essentially it is a movement with varied functions, concerned with the whole life of the individual and for the full extent of life, for the first lessons in parental responsibility are taught when the child first knows his parents and continue as long as he is a member of a social group. Its scope should encircle the outer horizons of all the specialties that give it meaning and its content should be a constantly changing organization of functional material which has its source in the integrated life of whole personalities.

VIII. List of Material on Parental Education Distributed By Various Agencies

Manual for Leaders	*Form* Printed or Mimeographed	*Terms* Free, Sold, or Lent	*Distribution* Limited to Members or Unlimited
American Association of University Women (A)	M	Note (A)	Note (A)
Children, the Magazine for Parents	P	S	U
Children's Conference, Child Training Committee, Cleveland	M	F	L
Child Study Association of America	P	S	U
Elizabeth McCormick Memorial Fund	M		L
National Congress of Parents and Teachers	P	F	L
Y. W. C. A., Commission on the Family in the Life of Today (F)	M		U
Syllabi for Study			
American Association of University Women	P M	S	U
Children, the Magazine for Parents	P	S	U
Children's Bureau, U. S. Dept. of Labor (B)	P	Note (B)	U
Child Study Association of America	P M	S	U
National Congress of Parents and Teachers	P	S	U
Y. W. C. A., Commission on the Family in the Life of Today (F)	M		U

Manual for Leaders	*Form* Printed or Mimeographed	*Terms* Free, Sold, or Lent	*Distribution* Limited to Members or Unlimited
Bibliographies			
American Association of University Women	P M	S	U
Bureau of Education, U. S. Dept. of the Interior (B)	P M	Note (B)	U
Bureau of Home Economics, U. S. Dept. of Agriculture (B)	M	Note (B)	U
Children's Bureau, U. S. Dept. of Labor (B)	P	Note (B)	U
Children, the Magazine for Parents	P	S	U
Child Study Association of America	P	S	U
Cleveland College	M	F	U
Elizabeth McCormick Memorial Fund	M	F	U
National Congress of Parents and Teachers	M	S	U
Y. W. C. A., Commission on the Family in the Life of Today (F)	M		U
Record Blanks			
Child Study Association of America	P	S	U
Children's Conference, Child Training Committee, Cleveland	M	F	L
Elizabeth McCormick Memorial Fund	P M		
Periodicals			
American Association of University Women	P	S	U
Children, the Magazine for Parents	P	S	U
Child Study Association of America	P	S	U
National Congress of Parents and Teachers	P	S	U
Subject-Matter, Pamphlets			
American Association of University Women	P	S	U
Bureau of Education, U. S. Dept. of the Interior (B)	P M	Note (B)	U
Bureau of Home Economics, U. S. Dept. of Agriculture (B)	P	Note (B)	U
Child Study Association of America	P	S	U
Children, the Magazine for Parents	P	S	U

Manual for Leaders	*Form* Printed or Mimeographed	*Terms* Free, Sold, or Lent	*Distribution* Limited to Members or Unlimited
Children's Bureau, U. S. Dept. of Labor (B)	P	Note (B)	U
Children's Conference, Child Training Committee, Cleveland	P M	S F	U
Elizabeth McCormick Memorial Fund	P M	S	U
Infant Welfare Society of Minneapolis	P	S	U
Iowa Child Welfare Research Station	P M	S F	U
Films, slides, pictures			
Bureau of Education, U. S. Dept. of the Interior (Note C)		L	U
Bureau of Home Economics, U. S. Dept. of Agriculture (Note C)		L	U
Children's Bureau, U. S. Department of Labor (Note C)		L	U
Subject-Matter, Books			
American Association of University Women		L	L
Bureau of Education, U. S. Dept. of Interior		L	U
Child Study Association of America		Note (H)	L
Elizabeth McCormick Memorial Fund			U
Infant Welfare Society of Minneapolis		Note (D)	L
Institute of Child Welfare Research, University of Minneapolis (Note G)		S	U
Iowa Child Welfare Research Station		Note (E)	L
National Congress of Parents and Teachers		S	U

NOTES

(A) Free to study group leaders affiliated with Association; for sale to others.
(B) One copy sent free; additional copies may be purchased from the Government Printing Office, Washington, D. C.
(C) In preparation.
(D) Lent to clinic patients.
(E) Lent to members of study groups.
(F) The manual for leaders, and syllabi for study are both contained in one pamphlet. Permission for the use of this material must be obtained from the Commission.
(G) This book is a reading course for parents.
(H) A unit library service is extended to study groups and persons holding Reader's Membership.

CHAPTER XV

PRACTICAL WAYS OF EDUCATING PARENTS AND TEACHERS TO THE VALUE OF MENTAL HYGIENE

I. Introductory

1. Increasing Consideration for Child Welfare

The value which society has placed upon human life has increased tremendously with the advance of civilization. This is particularly true regarding the life of the child. Economic states, religious rights, and strange superstitions no longer challenge the right of the child to exist. His prenatal development is carefully supervised. With adequate medical attention, he is assured of a comparatively safe passage into the world, and his physical well-being continues to be a matter of great concern. Nutrition, posture, teeth, tonsils, and all measures which tend toward the preservation of health are now accepted as matter-of-fact parental obligations. Failure on the part of parents to utilize modern methods of preventive medicine is regarded nowadays as negligence. Society, as never before, is holding them responsible for the physical well-being of their children. We have reason to rejoice that the child at present is considered such an important member of society, even though one looks back with regret that the advance which has brought about this humanitarian attitude was preceded by so much cruelty, greed, and neglect, and that many of the pages relating to the history of his development are blotted and smirched.

Following slowly and tardily upon the steps of those advances primarily concerned with the protection of the child's physical welfare, came other generous and altruistic impulses from society. These began with the consideration of the quality of life to which the child is entitled. It was on this wave of kindly sentiment, understanding, and vision that modern methods of education and industrial reform, as far as they relate to children, were launched.

2. The Responsibility of the Home

With the introduction of methods that tended to broaden our conception of education, much of the responsibility for the child's

health, morals, and manners, as well as for his education, was placed upon the teacher. In fact, we have not yet outgrown the idea that the teacher should be held responsible for the physical, spiritual, and intellectual welfare of the child, and, as a result, parents, quite unjustly, are dodging behind the schools and holding them accountable for many of their own failures. Defects in home training may be modified, but probably never eradicated, by the school, regardless of how efficient its system may be. To be sure, the intelligent teacher in the nursery school and kindergarten is in a position—a better position than the college professor—to render service to the child in the development of an adequate personality at a time when it is of greatest value. Yet it is not at all uncommon to hear an educational institution—particularly an advanced school or college—blamed for a student's inability to meet scholastic, social, and moral standards when even casual investigation of the case would show clearly that the student was not equipped to meet life adequately when he left his own home. The early habits he had acquired and the personality he had developed could not stand the test of later years.

Dr. Jessie Taft, of Philadelphia, who has made most valuable contributions to the subject of mental hygiene of the adolescent period, feels "that adolesence occurring without stress or strain is too unusual to be called normal and that mental hygiene problems arise in practically all ordinary lives of adolescents, even disregarding those extremes of maladjustment which seem to point toward serious mental breakdowns." Dr. Taft adds:

> Human life is a continuous struggle to organize its various needs and interests with relation to social and physical environment. The organism is striving to coördinate its own cravings so they can be expressed satisfactorily and objectively in socially approved ways. This necessitates that the individual use his intellect and intelligence in meeting the facts of every situation squarely and avoiding indirect evasive or subjective means to escape the problem with which he is confronted. The most important situations which the human being has to meet are social, and the facts he has to understand and work with for the solution of his problems are social too. We must therefore seek the causes of mental conflicts in the physical environment in which the individual is living and in the personalities with whom he has to deal. Adolescence seems to be the crucial point which tests out the wholesomeness of the previous development. It is the point at which the individual endeavors to emancipate himself from parental control, to establish his own independence which necessitates giving up many immature methods of meet-

ing the daily problems of life and adopting and developing new methods which will be compatible with adult standards in the environment in which he is living.

The education and training of the child begins at birth, and much that is of fundamental importance to the individual's future life must be acquired during the early years or not acquired at all. Rarely do we find thoroughgoing changes in personality taking place after six years of age, unless they are brought about by illness, accident, or some extraordinary intervening circumstance.

II. Modern Methods in Mental Hygiene

1. Analysis of Motives

The mental hygienist, in his study of behavior, is concerned more with motives than with conduct. It is the analysis of these motives that is our main objective and this we shall term the 'modern method of child training.' Observations over long periods have shown us that many of the habits that children develop during the preschool years are carried over with but little modification into later life, and also that many of the traits that become woven into the fabric of the child's personality during these years are not eradicated or altered to any great extent by time. They become part of the child—much like the contour of his features or the color of his eyes.

Within the past few years, two eminent pediatricians have called attention to the importance of a better understanding of the mental life of the child and the relation between psychogenic factors and a variety of symptoms seen in children. Dr. Borden S. Veeder, in the Chairman's address read before the Section on Diseases of Children, at the meeting of the American Medical Association, stated, "A knowledge of the psychology of childhood is as essential to the pediatrician as a knowledge of disease, as it is an integral part of the development of the child and without it one cannot understand many of the factors influencing physical growth." Dr. L. Emmett Holt, in the Presidential address read before the American Pediatric Association, expressed the following opinion: "One subject that is likely to have a much greater importance in the pediatrics of the future is that of mental hygiene. At the present time the profession is occupied chiefly with the later results of faulty mental medicine, as in various types of mental instability and

disease, the foundations for which are often laid in childhood and are due to maladjustments not understood and not corrected. Many of the habits, fears, tempers, night terrors, and whims of children have a significance that few of us appreciate. When these patients are brought to us and we discover that the symptoms have no basis in the physical condition of the children, we are apt to pass them over as not deserving serious consideration." If mental attitudes bear such a close relationship to physical health as these eminent physicians believe, we have much to hope for in the way of enlightenment and progress in our study of education and conduct disorders.

2. Relation of Conflicts to Behavior

It is in an effort to understand just how behavior is affected by the numerous and various conflicts which arise between the child and his environment and to meet these situations wisely that we turn to mental hygiene for help. It is true that mental hygiene has its limitations—it is not a panacea for all the ails of mankind—yet it may be said that the principles of mental hygiene are based upon a thorough understanding of the task to be performed. Like any other branch of medicine, it is limited by circumstances and conditions over which the psychiatrist has no control.

In this process of becoming socialized, the child not only has to meet the general problems that are brought about by his instinctive behavior but he soon learns that his environment furnishes individual problems which are peculiar to that particular setting. One child is thwarted by an arrogant, aggressive, domineering father, who sets standards so high that failure is inevitable. Another is handicapped by an over-solicitous mother, who refuses to allow him to grow up. Still others have to compete with superior brothers and sisters; and, consequently, are always suffering by comparison. Vice, poverty, discord, disease, and neglect may all become factors of great influence in the development of the child.

III. Importance of Mental Hygiene for Parents and Teachers

Two questions arise: 1. Why is it necessary or important that parents and teachers should be educated to appreciate the value of mental hygiene in child training? 2. Wherein do the mental

hygienists differ in their approach to these problems from that which has been ordinarily used by teachers and parents?

1. Increased Knowledge of Mental Health

The first question may be answered with the statement that the importance of mental hygiene is no greater to-day than it has ever been. We have acquired, however, information within the past twenty years concerning the mental health of the child that emphasizes the importance of such education. It has been learned that many of the queer, peculiar, inadequate individuals of society are the products of their environment and early training rather than of the forces of heredity. We have also acquired knowledge of methods which have enabled us to meet many of the problems concerning the mental health of the child with more wisdom and greater assurance of success than we could heretofore.

2. The Mental Hygienist's Approach

The fundamental difference between the mental hygienist's point of view and that of the parents and teachers, in relation to behavior, is that the mental hygienist is not so much concerned with the conduct of the child as with the underlying motives that act as a stimulus and driving force of the conduct. The mental hygienist's approach to the understanding of conduct is similar to that of the well-trained physician or surgeon who deals with the physical side of the individual's life. Just as a headache may be a symptom of eye-strain, brain tumor, or some other pathological condition, so may undesirable conduct, such as a temper tantrum, be the result of physical illness, jealousy, or a habit which the child has acquired in an effort to gain his own end. The mental hygienist attempts to determine the factors that underly the asocial conduct and deals with these factors rather than with the conduct itself. It would be obviously unfair to treat in the same way all children who steal. In one child, stealing may be an end in itself, but usually stealing is only a means to an end; that end may be to participate in gang life, to gain popularity, to emulate someone else, to have revenge or to reach one of many other ends. It is these determining situations and emotional reactions in the life of the child that need careful investigation in order to help the child overcome the stealing.

These same basic principles of mental hygiene enter into every field of the child's activity, whether it be in the home, at school, or on the playground. Every attempt the child makes to adjust himself to people or to situations must be taken into consideration, along with certain principles that are closely related and a part of the field of mental hygiene.

Inasmuch as the responsibilities of the mental health of the child are directly in the hands of the parents and teachers and can be delegated, except in a small measure, to others, it behooves both groups to acquaint themselves with the available knowledge pertaining to child training.

3. The Parent's Approach

Parents are interested in their children. To be sure, it may be a purely selfish interest which gratifies only their pride, or it may be an emotional concern over some rather inconsequential aspect of the child's life leading to over-solicitude and undue severity. However, the love that most parents have for their children assures us of interest, even though this interest and love do not necessarily mean that the relationship between parent and child will be handled with intelligence. In fact, it is often the emotional attitude which the parents have toward the child that prevents them from seeing the problem clearly and responding wisely. Yet it is this anxiety and concern which characterizes the mental attitude of parents toward their children that affords the one ever-present point of contact that the mental hygienist has with the home.

One cannot generalize about the parental attitudes toward the problem of training the child. One group of parents turns this responsibility over to the nurse or governess with little thought of how it is to be carried out, but with confidence that it will be accomplished. Others set out to absorb all that has been said or written on the subject of child training and attempt to apply it to the case at hand. There are those who, blissfully ignorant of the fact that a child needs training, bungle along, meeting one situation after another, always somewhat bewildered by the unexpected, yet firmly convinced that each problem will be the last. They fail to see the continuity in the mental development of the child's life. Most parents, however, have a keen appreciation of

the necessity of training the child. They recognize the fact that many habits are acquired only by repeating the same type of activity over and over again. They realize that it is not by mere chance that one child learns to manipulate a spoon, to control his bodily functions, and to acquire the habit of sleeping uninterruptedly twelve hours every night at two years of age, while another child, with an equally good mental equipment, is still untrained in these habits at the age of four. Neither are these parents in ignorance of the importance of training children to meet the ordinary everyday problems of life in a manner that is befitting to their age. They are aware that tantrums, whining, and crying spells cannot serve the child any useful purpose in later life, and they are concerned to eradicate these undesirable traits so as to avoid difficulties later on. Shyness, jealousy, cruelty, and fear are also recognized as personality traits that cannot be ignored without grave danger of starting the child out in life seriously handicapped. Such parents project into the future the personality deviations they see in their children and evaluate them accordingly. They understand that there are many unpleasant situations that may be handled without difficulty at the age of four, which, if neglected, will result in disaster at the age of thirty. It is encouraging that these problems are being recognized by parents; but it is unfortunate that, as a group, they are carrying on this important task of child training in such a haphazard way that they fail to utilize the methods which have proved successful.

It might be well to inquire whether parents are satisfied with the methods they are using at the present time in their efforts to help the child who is in the process of developing his lifelong habits. Are results reassuring? Do they indicate that parents are meeting wisely the innumerable problems with which they are confronted; or do they show that the parents are filled with doubts and misgivings, fully aware that something is missing that would render training less difficult to the parent and more effective to the child? Are they seeking for the knowledge, the poise, or technique that would give them more assurance that they are meeting the responsibility of parenthood in the best possible way? Do parents realize that they dodge many issues in their relationship with the child because of their inability to face them satisfactorily? Do they recognize the fact that they have assumed the cold, for-

bidding, disciplinarian attitude as the only method of gaining obedience? Do they fear that too much consideration for the child's point of view will lead to mutiny, and are they cognizant of the fact that this is evidence of their own limitations?

Such questions are important, for if parents, as a group, are satisfied with both their methods and their results, they will have no reason for concern regarding the training and future welfare of their children; and they certainly will not seek, or even accept, the modern doctrines of child training. If one can judge from the general drift of the conversation which takes place when a few parents are gathered together—conversation which invariably centers about their children—there seems to be little doubt that, as a group, they are not enjoying that sense of satisfaction that comes from self-assurance. The larger portion of them are dissatisfied and perplexed. They admit frankly that the conduct and attitude of their children are often beyond their understanding. In every home there seems to be a problem, not particularly serious, to be sure, but one that causes the thoughtful, interested, serious-minded mother no small amount of concern. John is going through a period of extreme shyness; Mary is jealous; Tommy is bold; Sally refuses to eat; Jerry is failing in school; Fred tells lies; Sam is appropriating things that do not belong to him; and Dick's disobedience in the presence of company is very humiliating. With each problem, arises the inevitable question, what can we do about it? There seems to be no agreement, even in the same household, as to how the problem can be best managed. The mother has one theory, the father another, and the grandmother a third, while every friend who has been taken into the confidence of the family adds his advice. This advice is often based upon the experience that some other parent has had with a similar problem, though in reality resemblance is often only superficial, for each child, being an individual unto himself with a personality that is not common property of children in general, is apt to have a motive of his own, differing from that of another child, for what appears to be the same behavior.

These doubts, misgivings, perplexities, and dissatisfactions that the more intelligent parents are experiencing with reference to child training are healthy signs, and on the whole encouraging. No longer are they satisfied that the methods used by their own par-

ents are applicable to the training of this new generation. Neither are they sitting back with the self-assurance of days gone by that time alone can solve the task at hand. It is gratifying that parents are facing their responsibilities frankly, and not dodging the vital issues like the proverbial ostrich who hides his head in the sand. The doctrine of predestination, comforting as it may be from some points of view, offers little comfort when the parent has a real issue to meet. Certainly parents, as never before, are seeking new ways of meeting old situations. They appreciate that their responsibilities to the child do not end with the provision of food, clothing, schooling, and amusement. They have been awakened to the fact that good bodily health and an unimpaired intellect are not in themselves an assurance of success, but that, after all is said and done, there is no problem more important for the child in his development than his learning how to live; how to adjust himself to meet in a happy and efficient manner the innumerable problems with which he is confronted daily even in the simplest of environments.

4. The Teacher's Approach

In a similar way we find that teachers and school people are becoming interested in the mental hygiene aspects of child life. At first this interest was aroused because of school failures. Teachers were anxious to find out why children did not learn to read, to write, to spell, to do arithmetic, to discuss history and geography. One of the early studies of failures in young children diagnosed the major causes as neglect, mental defect, special subject-matter defects, and psychopathic make-up.[1]

More recently, teachers have become concerned with the social adjustment and general behavior of their pupils. Nursery-school and kindergarten teachers especially have realized that children come to them with many habits and emotional biases which interfere with wholesome living with other people. They have realized their own limitations in educating children with such personality handicaps. They appreciate the necessity for sympathetic understanding and close coöperation with the home if the children are really to be helped. As teachers of little children they are in need

[1] Woolley, Helen Thompson, and Ferris, Elizabeth. *Diagnosis and Treatment of Young School Failures.* Washington, D. C.: U. S. Department of the Interior, Bureau of Education, Bulletin, 1923, No. 1.

of help in understanding children and improving schoool conditions. And at the same time they are in need of information which they may carry over to parents for the improvement of parental attitudes and home conditions.

In brief, parents and teachers are reaching out for help, willing to coöperate in their efforts to do what is best for the child. Therefore, it behooves those of us who are devoting our time to a better understanding of the child and his relationship to the home and school to take our responsibility seriously, and to lose no opportunity to educate and enlighten to the best of our ability those who are dependent upon us for assistance. To ascertain the practical ways and means of educating parents and teachers to the value of mental hygiene is a topic worthy of serious consideration.

IV. Problems in Educating Parents and Teachers

1. Lack of Understanding of the Possibilities of Training

Notwithstanding the fact that parents are much interested in the training of their children and are most desirous of sending them out into the world well equipped to meet life with its varied problems, many of them, unfortunately, are being denied the opportunity of keeping in touch with the modern trend of thought regarding the development of the child's mental life. Some are associating mental hygiene with mental deficiency and the more serious disorders of personality and thus overlooking its value in helping them to understand ordinary children. It has never occurred to them that child training in itself is a business of sufficient seriousness to require more than casual thought. Many busy, tired, and often-harassed mothers are showing less concern about the child's personality deviations than about his physical well-being, and are putting their trust in Providence and time to eliminate some of the undesirable conduct traits of their children. Still another group of parents is finding much consolation in explaining the child's asocial traits and personality twists by attributing them to heredity. The statement, "He is just like his father," is relieving many a mother from her responsibility of facing what appears to be a difficult situation of child training. The child's immaturity, the weather, bad company, are each, at various times, being blamed for undesirable conduct.

Not less discouraging is the attitude of the teacher who punishes a boy because he is fidgety and squirmy, harasses the slow child by threats and unjust comparisons, neglects and ignores the girl whose whole family are notoriously slovenly and worthless. Teachers under the pressure of percentage of promotions, grade norms, or a crowded curriculum become feverish and tense in their teaching and build an atmosphere in the classroom which interferes with, rather than aids, the learning process.

2. Inconsistency in Methods

As long as we have to deal with ignorance, indifference, unstable personalities, and distorted ideas, any plan that is to succeed in making mental hygiene practical and usable must first devise ways and means to educate parents as to what is meant by mental hygiene and how it can be of value in helping them to solve particular problems concerned with the training of their children. For example: Mary's mother, with her present knowledge of child training, accepts tantrums as a matter of course. To her it is nothing more than the expected reaction to many situations that the child has to meet. The way she manages the tantrum depends on how she happens to feel at that particular moment and how busy she may be. If time permits, and she is sufficiently irritated, the child is punished. On the other hand, it may be that she finds bribing suits her fancy and is more convenient. It has never occurred to her that tantrums may be due to many different causes and that the constructive treatment lies in removing the cause. There is no particular reason why she should know that it is the emotion of jealousy causing the tantrum which is the important thing in the child's life, and that it is the jealousy, not the tantrum, that is going to be the handicap in future years. This sort of information must be conveyed to the parents in such a way that they will at least be sufficiently interested to want to know more about it.

3. Dangers of Partial Knowledge

In our efforts to interest and educate parents and teachers to the value of mental hygiene and its practical application to the art of training children, we must keep in mind that there are limitations to which such training can be extended with safety, for it is true that a limited knowledge may be so misused by the over-

zealous lay person that even the recognized and approved training courses become dangerous. The dangers, however, are far outweighed by the advantages, when we consider that every mother, teacher, nurse, and physician is confronted daily with a multitude of problems to which the mental hygiene point of view can be profitably applied. These problems are inescapable. Every effort that we can make to assist these lay groups to acquire the available knowledge regarding mental hygiene is, therefore, worth while. This knowledge, to be sure, can be acquired only within limits that depend upon the training, experience, and intellect of those who seek it. However, something can be given to all interested which will undoubtedly help in the task of training the child. This necessity of grading the training to meet the requirements of a particular group is obvious. Information that would insult the intelligence of one group would be beyond the comprehension of another. Fortunately, much of the material on the subject of mental hygiene has been graded in such a manner as to meet the demands and needs of all, regardless of the cultural, social, or intellectual level to which they may belong.

There are two fairly well-defined steps essential in the process of education: first, to stimulate curiosity and arouse a desire to be informed; and second, to impart the knowledge to those who are thus interested, but uninformed. Recognition of these two steps is important. Time and effort will be wasted if an attempt is made to educate parents or teachers in a subject about which they have no desire to be informed. A few words follow on this point.

4. Creating an Interest in the Field

Many of the large and well-organized bodies, such as the National Congress of Parents and Teachers, the Child Study Association of America, the American Home Economics Association, and the American Association of University Women, have recognized their opportunity and their obligation to inform those whom they serve about the fundamental principles of mental hygiene. For many years these organizations have taken an important part in the education of parents. They have contributed in a most efficient and admirable way toward awakening those who are responsible for the training of children and encouraging them to seek diligently for the better methods for accomplishing their job.

The National Congress of Parents and Teachers has recently made mental hygiene one of the major divisions of its work. It has appointed a national chairman who in turn has coöperated with the state chairmen throughout the country with the idea of bringing the subject of mental hygiene to all of the members. If this can be successfully accomplished, mental hygiene can be intelligently discussed in the most remote villages. Literature is being published through the official organ of the National Congress of Parents and Teachers and disseminated to its various state branches throughout the country, while the development and preservation of the mental health of the child is always a topic of discussion at both national and state conventions. This large organization, with over one million members, is doing much to awaken interest in mental hygiene and to bring to many of its members new ideas relative to the importance of the mental health of the child.

It is the function of these organizations to arouse interest and to create a desire for a more intelligent understanding of the motives that actuate the conduct of the child, but it must be left for the smaller groups actually to supply the essential detailed information. Here, again, this can be accomplished only within certain limits. There comes a time when the parent and teacher must seek help in the problems of mental health from those who have had special training and large experience. Important as it may be for parents and teachers to be informed as to what they can reasonably expect by applying the principles of mental hygiene to child training, little or nothing of real value will have been gained unless we can present these principles in such a way that they can apply them to the everyday relationships and problems that exist in practically every home.

V. Possibilities and Limitations of Study

Mental hygiene must be made something that is useful and practical or it will fail to maintain a recognized place in the field of education and child training. On the basis of extensive experience as specialists in this field, it is not presumptuous to say that we are in a position to evaluate the worthwhileness of the various methods that have been utilized by wise parents for generations past and to suggest new ways of meeting old problems. It is true that much that the specialist has to contribute is directly dependent upon his ability to diagnose the problems presented and to treat the cause and not the symptoms. Such treatment involves a knowledge that has been attained by special training and special

experience, neither of which the average parent has. Therefore, this plan of educating parents and teachers must have its limitations. There will be problems which, because of their complexities and difficulties of interpretation, must be treated by a competent mental hygienist and cannot be delegated to either the parent or the teacher. Just as in the field of surgery parents can be trained to employ adequate prophylactic methods and thus prevent serious infections, even though they would be helpless if confronted with the task of doing a minor operation, so in the field of mental hygiene parents can be trained in the fundamental principles in such a way that the number of cases needing specialists would be greatly reduced.

There is, however, probably no branch of medicine and psychology that lends itself so readily to the quack and charlatan as that which has to do with mental health. The fact that these individuals seeking help are, by the very nature of their illness, emotionally unstable and extremely suggestible is reason enough to account for their willingness to accept help from whatever source it may be offered, especially when they have been repeatedly told either that there is nothing the matter with them or that, if there is, nothing can be done for them. This is often the situation when many anxious parents seek help from their regular physician in relation to a personality problem in one of their children. Worried and fearful, they often reach out for the ever-grasping hand of the irresponsible, untrained quack or take the advice of the well-meaning, but equally irresponsible, friend who finds her emotional satisfactions in life by meddling in the affairs of her neighbors.

VI. Sources for Mental Hygiene Education

There are three sources, at the present time, from which parents and teachers may obtain information and assistance of a practical nature relative to the principles of mental hygiene: the first, and perhaps most important, is literature; the second is lectures and study courses; the third is by direct contact with trained workers at clinics, child research centers, and nursery schools. These three sources will next be discussed.

1. Literature

Literature, as a means of education in mental hygiene, is put first because of its availability, reliability, and cost.

a. Agencies Disseminating Literature. From such organizations as the National Committee for Mental Hygiene, 370 Seventh Avenue, New York City; the Children's Bureau under the Department of Labor, Washington, D. C.; the Child Study Association, New York City; and the American Association of University Women practically every important publication can be obtained. One can also secure through these organizations reliable information as to the value of any book, pamphlet, or other literature in which one may be interested. If they will but use these agencies, then, parents and others interested in mental hygiene would be well protected against the flood of unreliable material that is being presented to the public for commercial purposes. Much of the most valuable literature on the subject of mental hygiene and its relation to child training has been put out in pamphlet form, so that it can be distributed at a minimum cost. For those parents and teachers living in the remote sections of our country, there is no better or more adequate way to keep informed as to the methods used by those that are thinking and working in the field of child guidance than through these large organizations. It does not matter whether parents have a general interest in mental hygiene, which they wish to develop as time goes on or are concerned with some particular problem of child training; by making contact with the agencies that are primarily concerned with the physical and mental health of children, they can secure valuable assistance.

b. Offprints. Fortunately, most of the literature has been prepared with the idea of making it available to parents and teachers; and although the original articles may have appeared in some medical or health journal, if they merit wider distribution, they are usually offprinted and obtainable at a nominal price.

The successful farmer avails himself of the information which is prepared and distributed by the Department of Agriculture. He learns much about seed and soil by keeping himself informed through reliable sources; he does not feel the necessity for employing an agricultural chemist to advise him of the exact amount of fertilizer he needs at various times and at various places; he wisely utilizes all the facilities at hand which will help him to obtain a desirable crop. If it is wisdom on the part of the farmer to keep informed as to the latest developments in his field of activity, so much more should it interest parents, whose crop is

much more important and vastly more difficult to raise, to keep informed about the care and training of children.

c. Books. Within the past few years, many books have been written and published on the subject of child training. There is something of value in most of them, yet only a comparatively few justify their existence or merit reading by the busy and overtaxed parent, because many of them are nothing more than philosophical discussions of rather abstract problems which leave the reader with few concrete suggestions. In order to obtain an unbiased opinion on the value of the books that are available for study on the subject of child training, opinions were sought from the National Committee for Mental Hygiene, the Child Study Association, the Children's Bureau, the American Association of University Women, the Child Guidance Clinic, New York City, and the Yale-Psycho Clinic, at Yale University. From the information received, the following books are recommended:

1. *Child Guidance,* by Smiley Blanton and Margaret C. Blanton (Century Co., New York).
2. *Child Management,* by Douglas A. Thom (Pamphlet issued by Children's Bureau, United States Department of Labor).
3. *Concerning Parents.* A symposium on present-day parenthood. (New Republic Publishing Co., New York.)
4. *Everyday Problems of the Everyday Child,* by Douglas A. Thom (D. Appleton & Co., New York).
5. *Guidance of Childhood and Youth,* edited by Benjamin C. Gruenberg (Macmillan Co., New York).
6. *The Mental Hygiene of Childhood,* by William A. White (Little, Brown & Co., Boston).
7. *The Nervous Child,* by Hector C. Cameron (Oxford University Press, New York).
8. *The New Psychology and the Parent,* by Crichton Miller.
9. *The Normal Mind,* by William H. Burnham (D. Appleton & Co., New York).
10. *Wholesome Childhood,* by Ernest R. Groves and Gladys Hoagland (Houghton Mifflin Company, Boston).

From the foregoing list of books, one may obtain an excellent account of our present-day information about all phases of mental hygiene as it relates to child training, which will supplement the information found in the material obtained from the national organizations already mentioned. This information will not prepare one to meet all the problems that may arise in the relationship of the child and his environment, but it will give parents a better

understanding as to how to approach many of the ordinary behavior difficulties.

d. Magazines. One of the magazines of national importance which is devoted entirely to the welfare of children is *Children: The Magazine for Parents.* This is a private publication which is gaining an excellent reputation through the high professional caliber of its contributors. *Child Welfare Magazine* and *Child Study,* as well as other magazines listed in an earlier chapter, also publish articles on mental hygiene.

Such journals should be in every home. They bring to the parents interesting and stimulating ideas and sound advice as to how to meet many of the complex situations that are constantly arising between the new and the old generations.

e. Newspapers. A few of the articles which appear in the daily newspapers deserve attention, especially those of Angelo Patri. There is no reason why the daily press should not become a means for the distribution of sound information on mental hygiene.

f. Bulletins. Several of the states have divisions or departments of mental hygiene. Particularly well-developed are those in Massachusetts and New York. The departments of health in some of our larger cities are recognizing the importance of mental health. A recent contribution which came from the Department of Health of the City of Chicago is an excellent example of this type of activity.

The bulletins issued by the state societies for mental hygiene, particularly the Bulletin and the Journal of the National Committee for Mental Hygiene, are sources of valuable information.

2. Lectures and Study Courses

a. Values. The lecture method as a means of parental education is excellent and has many advantages over the one just discussed. Unfortunately, only a comparatively small number of all the parents and teachers needing help can obtain it in this way. Lectures, to be of value, must be given as a well-organized course of instruction, which requires the services of one or more well-trained individuals. This necessarily confines education through this medium to the larger cities or to the suburbs which are easily accessible. Such courses entail a certain expenditure of money as well as of time; and they are, therefore, outside of the reach of

the great masses who are living on the marginal economic level. Yet, with all these objections, they serve well an important group of individuals, particularly teachers, nurses, and social workers, who come in daily contact with children. Such courses also offer advantages to those parents who are in a position to avail themselves of the opportunity. It is quite obvious that pursuing a course of study under a stimulating and intelligent director, with the privilege of participating in the discussions which follow, is a much more interesting way of acquiring knowledge in the subject of mental hygiene than through reading alone.

b. Extension Courses. The extension courses offered by some of the colleges and universities are well organized and comprehensive, covering the field of mental hygiene in a general, though necessarily elementary, way. However, when supplemented by outside reading, they give to the student much of value. Professor J. Mace Andress, of Boston University, who has had a long experience in organizing and developing extension courses in mental hygiene, writes as follows:

> About six years ago I became very much interested in the development of the study of mental health. Boston University offered no course in this field, and according to my perspective of the mental hygiene problem in relation to childhood, there was no one person capable of giving such a course.
>
> I conceived the idea of a coöperative course in which the Massachusetts Society of Mental Hygiene would give active help. We organized a course of fifteen lectures on what we called "Understanding the the Child and His Needs." The outstanding authorities in mental hygiene in Boston were each glad to give one or more lectures. On the lecture program which was printed and widely distributed we had such topics as "Understanding the Preschool Child," "The Rôle of Endocrine in the Child's Emotions," "Understanding the Backward Child," and "The Adolescent's Struggle for Adjustment."
>
> The lectures were given in the evening and proved to be very popular. At the end of each lecture there was a question period in which the lecturer answered any questions by members of the class.
>
> This course of lectures constituted a regular university course for which those in attendance might receive regular credit. To get such credit they were obliged to attend at least thirteen of the fifteen lectures and hand in a notebook of the lectures and abstracts of books and pamphlets required to be read.
>
> The demand year after year for the course by teachers, students, school physicians, nurses, and social workers and the comments by them

on the course indicate that it has been of real value to those whose daily activities bring them in direct contact with children.

Extension courses in parental education are offered by twenty-three colleges and universities, and although mental hygiene is not featured, it is stressed more or less in these courses—in the main, less; a sort of flavoring of mental hygiene. There is an extensive program of parental education administered by home economics supervisors and extension workers in a number of colleges. Such courses are of value because they stimulate interest and a desire for more knowledge.

c. Courses in Normal Schools. So far as we are able to determine, mental hygiene is a very much neglected subject in our normal schools. Only here and there is any attempt made to present this important subject to the students, even in the most elementary way. It would seem that education has advanced to the stage where it must be recognized that it is quite as important to know the individual as the subject which is being taught. A good intellectual equipment is too often handicapped by environmental situations which could be remedied easily if recognized. These cases cannot be detected unless the teacher has had some training in the field of mental hygiene.[2]

d. Courses in Theological Schools. Interestingly enough, some of the theological schools have recognized the importance of having a better understanding of the mental life of those whose spiritual welfare they are to direct, and have incorporated a course in mental hygiene into the curriculum. Dean Henry B. Washburn, at the Episcopal Theological School, Cambridge, Massachusetts, during the past year has organized such a course. There can be no doubt of the value or the necessity of theological students getting some training in the field of mental hygiene. The questions they ask and the problems they bring to the conference demonstrate how essential it is for ministers to recognize the psychiatric coloring that

[2] The point presented here merits careful consideration, particularly by those more enthusiastic adherents of the mental hygiene movement who seem to believe that the classroom teacher possesses, or may be brought to possess, some extraordinary insight into human nature and some extraordinary magic power to transform it. It is good form at educational gatherings to deliver inspirational eulogies on the marvellous service of the teacher in the building of character and personality. Only, a dispassionate man of science wants to be shown the evidence.—*Editor.*

so many of their problems present and to understand the desirability in these cases of help from the trained mental hygienist.

3. Study Groups

During the past few years groups of parents and other adults interested in the study of children[3] have increasingly devoted time to the mental aspects of child development. These groups are composed for the most part of serious-minded people who want to know more about children and the influences which determine their development. The groups vary in size from ten to forty or more members. They are sometimes under the leadership of a specialist in mental hygiene, but more often are doing independent study under the guidance of specially prepared outlines. The program for the year's work sometimes is entirely devoted to mental hygiene subjects,[4] but more often includes such subjects as a portion of the program.[5]

The worth of such groups depends in large measure upon the training of the leader or upon the ability of the members to do independent study and thinking and to make accurate observations of children and adults. Other important factors are the excellence of the syllabus for study and the availability of adequate literature. The value of such study groups for parents and teachers who have not access to university courses by mental hygiene specialists is very great. Continuity of study, objective observation of children, and contact with selected literature are certain to bring that more intelligent understanding of the causes of child behavior and that definite improvement in attitudes which are the first steps towards improvement of methods.

4. Individual Instruction of Parents

Some of the problems which confront parents are too difficult to be solved without direct contact with specialists in mental hygiene. Even the most intelligent parents are sometimes faced with

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[3] Such groups have been organized by the Child Study Association of America, American Association of University Women, the Parent-Teacher Association and other parental agencies discussed in Ch. X.

[4] Meek, Lois Hayden. *Guidance Materials for Study Groups No. 1: How Children Build Habits.* Washington, D. C.: American Association of University Women, revised edition, 1927.

[5] See *Outlines for Child Study,* Child Study Association of America. New York: Macmillan, revised edition, 1927.

situations which they cannot meet by study or reading. They need the immediate help of individual service such as is found in clinics, child research centers, and nursery schools.

a. The Clinic or Consultation Center. There are other parents who find in these institutions practically their only source of knowledge regarding mental hygiene and its application to child training. Lectures, literature, and study courses are for the most part just beyond their horizon. In a vague sort of way, they appreciate that such things exist, much as they are aware that finger bowls are used and that some people dress for dinner. Many of the everyday occurrences, ordinary routine experiences, and customs and manners which are generally accepted and followed quite without thought would be novel indeed to some who come to these institutions in our large cities. It is not surprising, then, that mental hygiene has played little part in their daily existence.

At these institutions, where mental hygiene is practised as well as taught, the parent has the opportunity of getting wise counsel from a scientifically-trained staff in a kind and sympathetic way. Here the physician or psychologist or other specialist has the ideal setting for explaining in detail just how the principles of mental hygiene are applicable to the situation at hand, guiding and directing its administration through well-organized social service. The parent's own emotional difficulties and the unhealthy reactions to the problems of the children are brought to light and faced squarely for the first time.

Parents need more in the way of training than simply to be told they are wrong in their methods—being preached at is always a bore, and it is apt to have the same effect on the parents that it has on the child. One must aim to show the parents why they respond to certain situations in the particular way they do; what the conflict is that brings about this particular reaction. The individual personal interview serves to do this as no other method of training can do.

With this direct contact it is not a difficult task to help parents to evaluate properly the problems with which they are concerned, as well as the problems which have been found by the specialist but which had passed by unrecognized by the parent. A mother may be much concerned about enuresis—it reflects on her training of the child; it hurts her pride; and, furthermore, it causes her much

extra labor. She may become much agitated at its existence and unduly worried about its persistence. Not only does she try to build the life of the child around this problem, but she often builds her own life and that of the rest of the family about it. On the other hand, if the child is shy, diffident, self-conscious, quiet, and not obtrusive, the parent may get a real sense of satisfaction and security in the fact that she has one child that is no trouble; yet these are malignant symptoms, worthy of much concern and careful consideration.

Only by personal contact can parents with such problems be helped to meet them wisely. These parents need the close and personal relationship with someone who not only understands but who has a sympathetic, humane approach; that is something that cannot be transmitted through lectures or literature.

b. Social Service. Another valuable opportunity for educational work with parents is through the visits of the social worker, connected with clinic, research center or school, to the home. These friendly and informal contacts are a great help in working out a gradual readjustment for the child.

Before a child comes to a consultation center, a visit is made to the home in order to understand the environmental setting and the attitudes of those in daily contact with the child. Often on this visit much time has to be spent in a detailed explanation of the purpose of mental hygiene and its relation to the guidance of a developing personality.

We are sometimes handicapped at the start by a lack of understanding. Parents may expect that treatment will be prescribed and carried out much as a splint is applied to a fractured arm and that they will take the child home well on the way to recovery. If this is their expectation, it is decidedly disappointing to find that the treatment suggested necessitates changes in attitudes and situations which can be accomplished only with steady purposeful effort on the part of all those involved. This idea can be met and forestalled in the home when the worker is making her social investigation.

As the home visit is made by the social worker before an appointment is given, the parents of necessity gain their first impression of the center in this way. For this reason, it is a particularly

strategic point and may be used to good purpose. After the visit has been made to the clinic or consultation by the parent and child, the social worker again visits the home. Frequently, the mother, in her eagerness to obtain all the help she can from the physician or psychologist, finds herself confused and unable to ask the questions she wished to in order to clarify the matter or she feels some diffidence about admitting to the physician that she did not understand; yet she is willing to express frankly to the social worker, while sitting at ease in her home, her doubts, misunderstandings, and difficulties. Here is the opportunity to interpret the clinical recommendations if they were not understood, to make the parents see the purpose of the suggestions made, to reinforce instructions already given, and to help to guide the changes in the social setting which will make possible the treatment desired.

The mother may quite honestly doubt the advisability of the treatment prescribed, and yet, in spite of the informality of the clinic, dislike to differ openly with the physician; but at her home these doubts may be talked over and explained. Another difficulty often met is that of a mother who was completely convinced during the consultation of the desirability of a plan of action laid out, but who lost her enthusiasm when at home on account of the attitude of some other member of the family. She is unable to present to them the arguments which were used to convince her. The social worker may provide these for her and help the mother to organize an educational campaign for the household, or the worker may see the relatives herself and include them among those with whom the clinic staff is to work directly.

The function of the social worker connected with a nursery school is very similar. Often she visits the home before the child is admitted to the nursery school. After admission she carries into those homes where it is necessary the recommendations of the nursery-school specialists. Her problem is the same whether she is the liaison between clinic and home, nursery school and home, or research center and home.

Closely related to the work of the social worker in the clinic is the work of the visiting teacher. The visiting teacher, or school counselor or home and school visitor as she is variously called, is a new specialist in the school who has had training and experience

both in teaching and social case work.[6] Hers is the problem of working with children in the school who are failing in school studies, troublesome in conduct, suffering from neglect, or who present other difficulties and maladjustments in school. With this responsibility, she works very closely with home, with school, and with community agencies which have an effect upon child life. The visiting teacher is not a psychiatrist, but she must be well enough trained in the principles of mental hygiene to be able to see the significance of various environmental influences upon child behavior. In her work she must know to what specialists to turn for help with specific cases. And above all she must be able to interpret the principles of mental hygiene to parents in terms which they can understand and to give suggestions which they can incorporate into their own living. "Many times, the adjustment of difficulty lies in the home. A change in diet or in hours of sleeping may be desirable, or perhaps a shifting of hours for certain chores, a lightening of housework, a cessation of illegal occupations, the correction of conditions which make for immorality, a change in attitude toward the child or in methods of discipline, or an increased interest in his success or failure at school."[7]

On the other hand, the visiting teacher may become a means for enlightening teachers to an understanding of mental hygiene. It is often the school which needs to adjust to the growing, developing personality of the child. "As a result of the new facts she discovers, the school is enabled to see what the actual situation is and to become aware of the real need of the child. It can often modify requirements to meet the newly seen limitations by changing the class, transferring the child to a special school, shifting to a new approach to the child, or connecting his school work more closely with his outside interests."[8] In this way the visiting teacher becomes a real factor in the community for the education of parents and teachers to the values of mental hygiene. Although for the most part her work has been confined to the older children in school who present the more difficult behavior problems, gradually school

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[6] Nudd, Howard W., "The purpose and scope of visiting teacher work," included in *The Problem Child in School*, by Mary B. Sayles. New York: Commonwealth Fund, 1927.

[7] *Ibid.*, p. 259.

[8] *Ibid.*, p. 259.

officials are realizing that preventive work with young children brings more permanent results and offers more hope for the building of useful citizenship and right living.[9]

We find that the parents accept the social worker or the visiting teacher as a 'professional confidante,' to whom they may turn in time of difficulty to discuss their problems, as one who will help them to make their particular difficulty clear to the school or clinic research center in order that they may obtain wise and understanding guidance.

VII. Conclusion

Psychologists and psychiatrists are beginning to realize that, if mental hygiene is to be of practical value, it must be reduced to such terms as can be appreciated and understood by the laymen.

The personal contacts with parents and teachers are by far the most important that the child makes; to a large extent, his habits and personality are dependent upon the wisdom with which these two groups meet the child and his problems. It is, therefore, not merely desirable, but absolutely necessary, that both parents and teachers acquire the best possible understanding of those whom they are called upon to guide and direct, and it is quite as essential that those who are specializing in this field of child guidance make available to the layman such knowledge as they may possess. As already suggested, this can be done, in part, by means of lectures, literature, and personal contact, and with the purpose of bringing as many parents and teachers as possible in touch with the point of view of mental hygiene. The essence of this point of view is a better understanding of the individual relationships, so that all those in contact with him may fulfill their obligations to the child in the most efficient manner possible.

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[9] Additional references to the visiting teacher movement are:

Culbert, Jane F. *The Visiting Teacher.* New York: Commonwealth Fund. 10 pp.

Ellis, Mabel Brown. *The Visiting Teacher in Rochester.* New York: Commonwealth Fund. 204 pp.

Nudd, Howard W. *The Purpose and Scope of Visiting Teacher Work.* New York: Commonwealth Fund. 32 pp.

CONSTITUTION OF THE NATIONAL SOCIETY FOR THE STUDY OF EDUCATION

(As Revised at the 1924 Meeting and Amended at the 1926 and 1928 Meetings of the Society)

Article I

Name.—The name of this Society shall be "The National Society for the Study of Education."

Article II

Object.—Its purposes are to carry on the investigation of educational problems, to publish the results, and to promote their discussion.

Article III

Membership.—Section 1. There shall be three classes of members—active, associate, and honorary.

Section 2. Any person who is desirous of promoting the purposes of this Society is eligible to membership and shall become such on payment of dues as prescribed.

Section 3. Active members shall be entitled to vote to participate in discussion, and under certain conditions, to hold office.

Section 4. Associate members shall receive the publications of the Society, and may attend its meetings, but shall not be entitled to hold office, or to vote, or to take part in the discussion.

Section 5. Honorary members shall be entitled to all the privileges of active members, with the exception of voting and holding office, and shall be exempt from the payment of dues.

A person may be elected to honorary membership by vote of the Society on nomination by the Board of Directors.

Section 6. The names of the active and honorary members shall be printed in the Yearbook.

Section 7. The annual dues for active members shall be $2.50 and for associate members, $1.50. The election fee for active and for associate members shall be $1.00.

Article IV

Officers.—Section 1. The Officers of the Society shall be a Board of Directors, a Council, and a Secretary-Treasurer.

Section 2. The Board of Directors shall consist of six members of the Society and the Secretary-Treasurer. Only active members who have contributed to the Yearbooks shall be eligible to serve as directors.

Section 3. The Board of Directors shall be elected by the Society to serve for three years, beginning on March first after their election. Two members of the Board shall be elected annually (and such additional members as may be necessary to fill vacancies that may have arisen).

This election shall be conducted by an annual mail ballot of all active members of the Society. A primary ballot shall be secured in October, in which the active members shall nominate from a list of members eligible to said Board. The names of the six persons receiving the highest number of votes on this primary ballot shall be submitted in November for a second ballot for the election of the two members of the Board. The two persons (or more in the case of special vacancies) then receiving the highest number of votes shall be declared elected.

Section 4. The Board of Directors shall have general charge of the work of the Society, shall appoint its own Chairman, shall appoint the Secretary-Treasurer, and the members of the Council. It shall have power to fill vacancies within its membership, until a successor shall be elected as prescribed in Section 3.

Section 5. The Council shall consist of the Board of Directors, the chairman of the Society's Yearbook and Research Committees, and such other active members of the Society as the Board of Directors may appoint from time to time.

Section 6. The function of the Council shall be to further the objects of the Society by assisting the Board of Directors in planning and carrying forward the educational undertakings of the Society.

Article V

Publications.—The Society shall publish *The Yearbook of the National Society for the Study of Education* and such supplements as the Board of Directors may provide for.

Article VI

Meetings.—The Society shall hold its annual meetings at the time and place of the Department of Superintendence of the National Education Association. Other meetings may be held when authorized by the Society or by the Board of Directors.

Article VII

Amendments.—This constitution may be amended at any annual meeting by a vote of two-thirds of voting members present.

MINUTES OF THE BOSTON MEETING OF THE SOCIETY FEBRUARY 25 AND 28, 1928

I.

The first session of the Society, Saturday evening, February 25, was devoted to a discussion of the *Twenty-Seventh Yearbook* of the Society, entitled "Nature and Nurture." This session considered more especially material in Part I, bearing the subtitle: "Their Influence upon Intelligence."

Huntington Hall, Boylston Street, where the meeting was held, seats 935 persons. Every seat was taken; some fifty persons stood throughout the program, while others left the door without attempting to enter.

With Dr. L. V. Koos, Chairman of the Board of Directors, presiding, the following program was carried out as announced, save that the speakers were allowed 25 instead of 20 minutes each.

FIRST SESSION—FEBRUARY 25, 1928

Saturday Evening

At Huntington Hall, 8:00 P. M.

I. "The Significance of the Yearbook on Nature and Nurture"
Lewis M. Terman. Professor of Psychology, Stanford University, California, and Chairman of the Yearbook Committee
(20 Minutes)

II. "An Evaluation of the Evidence in Part I of the Yearbook and Its Bearing on the Interpretation of Intelligence Tests"
Frank N. Freeman, Professor of Educational Psychology, University of Chicago, Chicago, Illinois
(20 Minutes)

III. "The Significance of Unambiguous Evidence as to Environmental Influences."
William C. Bagley, Professor of Education, Teachers College, Columbia University, New York City
(20 Minutes)

IV. "Editorial Impressions of the Contribution to Knowledge of the Twenty-Seventh Yearbook."
Guy M. Whipple, Director of the National Intelligence Tests, and Editor of the Yearbook, Danvers, Massachusetts
(20 Minutes)

V. "Intelligence as Method of Adaptation"
Charles H. Judd, Director of the School of Education, University of Chicago, Chicago, Illinois.
(20 Minutes)

VI. Discussion

Open to all active members of the Society. Time-limit, each three minutes.

Among those who spoke briefly in the ensuing discussion were Drs. Terman, Courtis, Judd, and Freeman. Others doubtless would have participated had not the hour been so late.

The presentation of the Yearbook Saturday evening undoubtedly was a valuable means of bringing the Society's work to the attention of schoolmen. "Nature and Nurture" seemed to be the phrase prevalent in Boston hotel lobbies for hours after the meeting.

II.

The second session of the Society, Tuesday evening, February 28, was held at Sanders Theater (Memorial Hall), Harvard University, Cambridge, at 8:00 o'clock.

This session was devoted to a discussion of the *Twenty-Seventh Yearbook* of the Society, entitled "Nature and Nurture," more particularly to a discussion of Part II, "Their Influence upon Achievement."

Despite the attraction of other and more accessible meetings at Boston, there was an audience of 1,000 assembled when Chairman Koos called the meeting to order.

Owing to conflicting engagements, Dr. Terman, who had crossed the continent to participate in the launching of the *Twenty-Seventh Yearbook,* spoke after Dr. Gates, and the Secretary, Dr. Whipple, occupied a few minutes as first speaker by explaining the plans of the Society with respect to future yearbooks, and by also explaining briefly the work of Dr. Terman's Committee which produced the Yearbook. Otherwise, the following program was presented as scheduled.

SECOND SESSION—FEBRUARY 28, 1928

Tuesday Evening

At Sanders Theater, Harvard University, Cambridge, 8:00 P. M.

I. "Introducing Part II of the Yearbook"
Lewis M. Terman, Professor of Psychology, Stanford University, California, and Chairman of the Yearbook Committee.
(20 Minutes)

II. "The Measurement and the Analysis of School Achievement"
Stuart A. Courtis, Professor of Education, University of Michigan, Ann Arbor, Michigan
(20 Minutes)

III. "Observed Results and Theoretical Concepts"
Arthur I. Gates, Professor of Education, Teachers College, Columbia University, New York City
(20 Minutes)

IV. "Heredity and Environment or Capacity and Training?"
Bird T. Baldwin, Research Professor in Educational Psychology, State University of Iowa, Iowa City Iowa
(20 Minutes)

V. "The Meaning of Small Differences in Educational Procedure"
B. R. Buckingham, Professor of Education and Director of Bureau of Educational Research, Ohio State University, Columbus, Ohio
(20 Minutes)

VI. Discussion
Open to all active members of the Society. Time-limit, each three minutes.

As in the case of Saturday's meeting, the lateness of the hour, and perhaps the gloominess of the hall, appeared to stifle the ambitions of the audience. At any rate, after Dr. Rugg had offered his place to "Hezekiah," that gentleman could not be smoked out of his seclusion.

III.

There was but one item of business considered at the business meeting which followed immediately afterward.

The Secretary presented a recommendation from the Board of Directors that Article III, Sec. 7, of the Constitution be amended by changing $2.00 to $2.50, to read:

> "The annual dues for active members shall be $2.50 and for associate members, $1.50. The election fee for active and for associate members shall be $1.00."

provided: (1) that this change shall apply to the dues for 1929 and thereafter, (2) that all active members shall be given opportunity to endorse this amendment by mail, (3) that more than half of those voting on this mail ballot do endorse the amendment, and (4) that all active members shall receive one cloth-bound, instead of two paper-covered, copies of each yearbook.

This recommendation was adopted by unanimous vote. It may be explained here that its object is simply to *legalize* the change of dues in advance of 1929 in case the mail vote favors the change.

GUY M. WHIPPLE, *Secretary*

SYNOPSIS OF THE PROCEEDINGS OF THE BOARD OF DIRECTORS OF THE SOCIETY DURING 1928

At the behest of the Board of Directors, the Secretary has prepared the following synopsis, in order that the members of the Society may be informed concerning the acts and policies of those who are directing the Society. The synopsis does not comprise all the business transacted by the Board; matters of minor importance have been omitted.

First 1928 Meeting of the Board

(Hotel Westminster, Boston, Massachusetts, February 25, 1928)

Present: Messrs. Buckingham, Judd, Koos, Rugg, and Whipple (and by invitation, Bagley).

Absent: Messrs. Charters and Horn.

(1) The following decisions of the Board settled by correspondence between February 27, 1927, and February 24, 1928, were made a matter of record:

(a) Declining with regrets an invitation to participate in the centennial exercises of Lindenwood College.

(b) Appropriating for the expenses of the Committee on Preschool and Parental Education $200, supplementing a grant made to this Committee by the Laura Spelman Rockefeller Memorial.

(c) Approving certain financial arrangements between the Society and the publisher with regard to the sale of bound copies of the first twenty-six Yearbooks.

(d) Responding negatively to a request of a member of the Society for special reprints of excerpts from a yearbook for classroom use.

(e) Endorsing certain provisional regulations adopted by the Secretary for guiding the publisher in making offprints from the 1928 Yearbook.

(2) The Board received the report of the Secretary announcing the results of the balloting of October and November, 1927, whereby Director Judd was re-elected and Professor William C. Bagley was elected to succeed Director Charters. The Board also approved the

action of the Secretary in placing upon the final ballot the names of those persons only who were willing to serve as directors, if elected.

(3) Director L. V. Koos was re-elected Chairman of the Board of Directors to serve one year, beginning March 1, 1928.

(4) Professor F. N. Freeman submitted a brief report on the matters discussed at the Council of the A. A. A. S. during the Nashville meeting which were of interest to this Society. The Board voted that for the year 1928 the representative of the Society on the A. A. A. S. Council should be the Secretary and one other person appointed by him. The Secretary later appointed Director Koos.

(5) Director Koos reported informally on the activities of the Commission on Research in Secondary Education, and it was voted that he should continue as the Society's representative on this Commission.

(6) The report of the Treasurer for 1927, duly audited by a certified public accountant, was submitted and ordered printed in the 1929 Yearbook. The Treasurer called attention to the unusual decrease in expenditures and the unusual increase in assets characterizing this report, which were due to special circumstances prevailing during the year. The Board voted to continue the policy of bonding the Treasurer at the expense of the Society and paying the expense of an annual audit by a certified public accountant.

(7) Reports were received from various yearbook committees and disposed of as follows:

(a) *Committee on Nature-Nurture.* The suggestion of Director Whipple that this Committee might be continued in order to present a supplementary report carrying forward the discussion in the 1928 Yearbook was debated at length, and it was finally voted that the members of the Society should be invited to suggest whether further presentation of this topic could be undertaken with advantage.

(b) *Committee on the Textbook* reported progress and hoped to complete its work in time for publication in 1929. The Committee was authorized to utilize its unexpended balance and an additional amount not exceeding $500 to bring its yearbook to completion.

(c) *Committee on Preschool and Parental Education* reported progress and expected to present its work as one part of the 1929 Yearbook.

(d) *Committee on Measuring the Efficiency of Teaching.* Since Dr. Courtis reported no prospect of activity under his direction, it was voted, on the suggestion of Dr. Bagley, that the Secretary confer with Messrs. Myers and Symonds concerning the possibility of organizing an active committee.

(8) The Secretary reported the outcome of the straw ballot sent to 150 active members to determine their attitude toward increasing the dues of active members and receiving one cloth-bound copy of the yearbook in return. It was voted to mail another ballot to all active members and to present at the business meeting the following Tuesday a motion to increase the dues of active members to $2.50 in case the majority of the replies received from the mail ballot favored this change.

(9) Voted that it would be inexpedient to hold a meeting of the Society in December, 1928, in connection with the A. A. A. S.

(10) Voted that it would be unwise hereafter to hold a formal, full session of the Board during N. E. A. week.

(11) Voted, after discussion, that Professor O. G. Brim, of Ohio State University, should be asked to assume the chairmanship, and Professor Norman Frost, of George Peabody College for Teachters, the secretaryship, of a Committee on Rural Education, of which Professor George A. Works should be asked to become one member.

(12) Voted to appoint Professor F. B. Knight, of the State University of Iowa, as Chairman of a Yearbook Committee on Arithmetic, and to ask him to nominate other members to serve on this Committee with him. An amount not to exceed $1200 was placed at the disposal of this Committee with the expectation that a yearbook would be published in 1930.

(13) Consideration of Yearbooks on the American College, Science Teaching, Elementary Science, The Professional Preparation of Teachers, and Secondary Education was deferred to the next Board meeting.

(14) The budget for 1928 was adopted.

Second 1928 Meeting of the Board

(Hotel Seneca, Rochester, New York, November 17, 1928)

Present: Messrs. Bagley, Buckingham, Judd, Koos, Rugg, and Whipple.

Absent: Mr. Horn.

(1) The decisions of the Board since the February, 1928, meeting were entered upon the records as follows:

(a) Recording the adoption by the Society of the amendment to the Constitution placing the annual dues of active members at $2.50.

(b) Endorsing the Secretary's proposal to offer active members in 1929 a special price on an extra paper-bound copy of the Yearbook.

(c) Voting to print in some periodical the addresses presented at the Boston meeting.

(d) Permitting the extension of the Preschool Yearbook to 750 pages and appropriating $200 extra for this Committee.

(e) Approving nominations for membership on the Rural Education Committee of Miss Fannie Dunn, Mrs. Katherine Cook, and Professor Julian Butterworth, and appropriating $300 for this Committee during 1928.

(f) Approving nominations for the Arithmetic Committee of Drs. J. R. Clark, C. E. Greene, and R. L. West. (Dr. Clark has since resigned.)

(g) Voting to fix the stipend of the Secretary-Editor at $2500 and authorizing the expenditure of not to exceed $25 a month for office rent.

(2) Guy M. Whipple was re-elected to serve as Secretary-Treasurer and Editor for three years beginning March 1, 1929.

(3) The results of the special inquiry directed to active members concerning the Nature-Nurture Yearbook Committee were reported as favoring the continuance of this Committee, but the Board voted that the Committee be discharged without precluding the appointment of a similar Committee later.

(4) Director Horn was requested to prepare appropriate resolutions on the death of Professor Baldwin.

(5) On the basis of figures showing the cost of manufacturing and delivering yearbooks, the Board approved the recommendation

of the Treasurer that the Society be asked to raise the dues of associate members in 1930 to $2.00.

(6) Reports were received from Yearbook Committees and disposed of as follows:

(a) *Committee on Textbooks.* Suggestions were made for the extension of the scope of this yearbook and the enlargement of its committee.

(b) *Committee on Arithmetic.* Provisionally, it was agreed that the report of this Committee might be expanded to occupy two parts of a yearbook.

(c) *Committee on Rural Education.* This Committee reported progress and it is now hoped that it will make two reports, the first, if possible, in 1930.

(7) In connection with yearbooks proposed on Teacher Placement, The Professional Preparation of Teachers, and Measuring the Efficiency of Teaching, arrangements were made for a conference between Messrs. Bagley, Freeman, and Earl Rugg to consider the possibilities of combining two or more of these topics.

(8) On account of the activities of other organizations in the same field, it was decided that action on the proposed Yearbook on the American College should be deferred until the next meeting of the Board, when Dr. H. O. Rugg is expected to report upon the situation.

(9) A proposal looking toward the production of a yearbook on Secondary Education was similarly referred to Director Koos for a report at the next meeting of the Board after conferring with workers in this field.

(10) An informal report of the Treasurer for 1928 was followed by the presentation of a proposed budget for 1929 and the adoption of that budget.

It was voted that the investment of permanent funds should be in securities authorized for trust funds.

Discussion of the policy of the Secretary in making permanent investments led to the adoption of a plan for creating a fund for stimulating research in the field of education described elsewhere in this Yearbook.

(11) Voted to hold a formal meeting of the Board, May 11 and 12, 1929, at Cleveland, Ohio.

PLANS FOR THE SUBVENTION OF RESEARCH

At the meeting of the Board of Directors held at Rochester, New York, November, 1928, it was voted to increase the investments of the Society in interest-bearing securities by two thousand dollars or more annually until a permanent fund of approximately twenty thousand dollars is accumulated, the income of which (approximately one thousand dollars annually) shall thereafter be employed, under direction of the Board, for the stimulation and subvention of investigations in the field of education.

As will be evident from an examination of the Treasurer's annual report, this permanent fund will presumably be established in five or six years. However, in order that this undertaking of the Society may not be delayed, the Board of Directors also voted that, pending the completion of the fund, the Society announce its willingness to consider the support of such proposals for educational research as meet the approval of the Board, and that provisionally the sum of two thousand dollars be allocated to this purpose.

The investigations contemplated under this new development of the Society's activities are conceived of as carried on independently of the activities of the Society's various yearbook committees, though it is assumed that the investigations will often emerge from, or lead to, the production of yearbooks.

Members of the National Society for the Study of Education are urged to submit proposals for research or constructive suggestions for the general organization and development of this phase of the Society's work. Communications should reach the Secretary before May 1st, if they are to be considered at the next regular meeting of the Board of Directors, to be held May 11-12, 1929.

GUY M. WHIPPLE, *Secretary.*

REPORTS ON YEARBOOKS IN PREPARATION OR UNDER CONSIDERATION

The following reports on yearbooks in preparation have been assembled by the Secretary from reports made to the Board of Directors by the several chairmen of the committees concerned. They are presented here in order that members of the Society may be informed concerning the status of the work of these committees undertaking the production of future yearbooks. Communicate directly with the chairman of any committee for whose work you have suggestions.

I. Yearbook on the Selection of Textbooks

(Dr. J. B. Edmonson, University of Michigan, Ann Arbor, Michigan, *Chairman*)

An account of the status of the work of this Committee in the fall of 1927 was published in the *Twenty-Seventh Yearbook*, Part II, page 367.

On account of the demands for space made by the present yearbook on Preschool and Parental Education, the Committee on the Selection of Textbooks has deferred presentation of its yearbook until 1930 or 1931. In the meantime the Committee has embraced the opportunity offered by this delay to enlarge its membership and to extend the scope of its investigations.

II. Yearbook on Arithmetic

(Professor F. B. Knight, State University of Iowa, Iowa City, Iowa, *Chairman*)

The members of this Committee are Dr. B. R. Buckingham, Professor G. T. Buswell, Dr. Charles E. Greene, Professor F. B. Knight, and Dr. Roscoe L. West.

This Committee has made substantial progress in organizing material for a yearbook on Arithmetic which will probably include (1) a section on the course of study, (2) a section on the training of teachers, (3) a section on testing and remedial programs, (4) a section on the fundamental technology of instruction, (5) a section on the critical appraisal of published research, and (6) a section on new research.

It is hoped that at least one part of the *Twenty-Ninth Yearbook* will be devoted to a report from this Committee.

III. Yearbook on Rural Education

(Professor O. G. Brim, Ohio State University, Columbus, Ohio, *Chairman*)

The members of this Committee are Professors O. G. Brim, and Julian Butterworth, Mrs. Katherine Cook, Miss Fannie Dunn, Professors Norman Frost and George A. Works.

This Committee has developed a comprehensive program for the study of Rural Education which will give adequate consideration to the various perplexing problems encountered in this field. Under the present plan the Committee may be expected to present a portion of its material in one part of one of the yearbooks of the next two years and to follow this with a second report, probably the year following.

IV. Yearbooks Under Consideration

The Board of Directors has under consideration proposals presented by members of the Society for the preparation of yearbooks on the following topics: (1) "The Measuring of Teaching Efficiency," (2) "The Professional Preparation of Teachers," (3) "The Placement of Teachers," (4) "Elementary Science," (5) "Secondary Education," and (6) "The American College."

AUDIT OF ACCOUNTS OF THE TREASURER OF THE SOCIETY FOR 1927

STATEMENT OF RECEIPTS AND EXPENDITURES FOR THE YEAR JANUARY 1, 1927 TO DECEMBER 31, 1927

Balance on Hand, January 1, 1927 per prior report			$8,621.43
RECEIPTS			
From Sale of Yearbooks by the Public School Publishing Company:			
Royalties, June to December, 1926	$7,191.43		
Royalties, January to June, 1927	7,759.72	$14,951.15	
Interest on Bonds, etc.:			
Interest on Registered Liberty Bond	$ 42.50		
Interest on Other Liberty Bonds	38.22		
Interest on Dominion of Canada Bond	55.00		
Interest on Continental Gas and Electric Company Bond	60.00		
Interest on Detroit-Edison Bond	50.00		
Interest on U. S. Treasury Bond	63.75		
Interest on Royalties	256.64		
Interest on Savings Account	41.72		
Interest on Checking Account	71.39	679.22	
Profit on Sale of Continental Gas and Electric Bond	145.00		
U. S. Treasury Certificate cashed, carried at $800.00	200.00	345.00	
Dues from Active and Associate Members		5,251.80	
Total Receipts for the Year			21,227.17
Total Receipts, Including Initial Balance			$29,848.60
EXPENDITURES			
Yearbooks			
Manufacture and Distribution			
Reprinting 200 3d, Pt. I		$ 64.00	
Reprinting 200 7th, Pt. I		69.00	
Reprinting 200 8th, Pt. II		78.00	
Reprinting 200 16th, Pt. II		71.20	
Reprinting 1017 22d, Pt. II		408.92	
Reprinting 5000 24th, Pt. I		1,647.80	
Reprinting 2000 26th, Pt. II		566.50	
Correcting and Mats, 26th, Pts. I and II		387.25	
Binding 25 Sets of 1st 26 Yearbooks		512.50	$ 3,805.17
Preparation			
Terman Committee		$ 791.13	
Arithmetic Committee		91.80	882.93
Total Cost of Yearbooks			$ 4,688.10

Dallas Meeting

Travel and Other Expenses of Secretary	203.83	
Travel, Chairman Yearbook Committee	97.50	
Programs	26.25	
Total for Dallas Meeting		$ 327.58

Secretary's Office

Secretary's Salary	$1,625.00	
Travelling Expense	77.40	
Clerical Assistance	360.12	
Equipment	2.10	
Postage and Express	120.78	
Stationery and Printing	135.35	
Office Supplies	7.36	
Telephone and Telegraph	20.83	
Dues Refunded and Bad Checks	34.00	
Bonding	12.50	
Auditing	40.00	
Fire Insurance	6.00	
Miscellaneous	4.70	
Total for Secretary's Office		2,446.14

Investments

Interstate Power 1st 5's (1957)	$ 990.00	
Liberty Bond	109.91	
Total Investments		1,099.91
Total Expenditures for 1927		$ 8,561.73
Balance on Hand December 31, 1927		21,286.87
Total Expenditures and Closing Balance		$29,848.60

ANALYSIS OF BALANCE ON HAND DECEMBER 31, 1927

Balance on Hand December 31, 1927:	
Checking Account, Danvers National Bank, $13,860.52	
$2.50 Unpaid Checks	$13,858.02
Savings Account, Danvers National Bank	1,119.72
$1,000 Dominion of Canada Bond 5½ 8/1/29	979.75
$1,000 Detroit-Edison Bond 5 1940	940.00
$1,000 U. S. Treasury Bond Registered 4¼ 1938	1,000.00
$2,000 Liberty Bonds	1,926.88
Undeposited Dues	455.50
Checks Out for Collection	17.00
$1,000 Interstate Power 1st 5's 1957	990.00
Balance December 31, 1927	$21,286.87

February 17, 1928.

We hereby certify that we have verified the securities, reconciled the bank balance and footed the receipts and disbursements of the National Society for the Study of Education for the year ended December 31, 1927, and that we found all income recorded as received when due and all disbursements supported by vouchers.

WHITE AND PATON,
By A. H. Paton
Certified Public Accountants.

HONORARY AND ACTIVE MEMBERS OF THE NATIONAL SOCIETY FOR THE STUDY OF EDUCATION

(This list includes all active members enrolled on December 15, 1928)

HONORARY MEMBERS

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Dewey, John, Columbia University, New York City.
Hanus, Paul H., Harvard University, Cambridge, Mass.

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Youngblood, G. W., High School Bldg., Peru, Ind.

Ziegler, J. W., John C. Winston Co., 1006 Arch St., Philadelphia, Pa.
Zinns, Roland W., Prin., George W. Peckham Jr. High School, Milwaukee, Wis.
Zirbes, Miss Laura, Ohio State Univ., Columbus, Ohio.
Zook, D. E., Prin., Nokomis Township High School, Nokomis, Ill.
Zornow, Theo. A., Prin., Madison Jr. High School, Rochester, N. Y.

INFORMATION CONCERNING THE NATIONAL SOCIETY FOR THE STUDY OF EDUCATION

1. **Purpose.** The purpose of the National Society is to promote the investigation and discussion of educational questions. To this end it holds an annual meeting and publishes a series of Yearbooks.

2. **Eligibility to Membership.** Any person who is interested in receiving its publications may become a member by sending to the Secretary-Treasurer information concerning name, address, and class of membership desired (see Item 4) and a check for $3.50 or $2.50 (see Item 5 and footnote).

Membership may not be had by libraries or by institutions.

3. **Period of Membership.** Applicants for membership may not date their entrance back of the current calendar year, and all memberships terminate automatically on December 31st, unless the dues for the ensuing year are paid as indicated in Item 6.

4. **Classes of Members.** Application may be made for either active or associate membership. Active members pay dues of $2.50 annually, receive a cloth-bound copy of each publication, are entitled to vote, to participate in discussion, and (under certain conditions) to hold office. Associate members pay dues of $1.50* annually, receive a paper-bound copy of each publication, may attend the meetings of the Society, but may not vote, hold office or participate in discussion. The names of active members only are printed in the Yearbook. There were in 1928 about 1200 active and 1100 associate members.

5. **Entrance Fee.** New active and new associate members are required the first year to pay, in addition to the dues, an entrance fee of one dollar.

6. **Payment of Dues.** Statements of dues are rendered in October or November for the following calendar year. By vote of the Society at the 1919 meeting, "any member so notified whose dues remain unpaid on January 1st, thereby loses his membership and can be reinstated only by paying the entrance fee of one dollar required of new members."

School warrants and vouchers from institutions must be accompanied by definite information concerning the name and address and class of membership of the person for whom membership fee is being paid.

7. **Distribution of Yearbooks to Members.** The yearbooks, ready prior to each February meeting, will be mailed from the office of the publishers, only to members whose dues for that year have been paid. Members who desire yearbooks prior to the current year must purchase them directly from the publishers (see Item 8).

8. **Commercial Sales.** The distribution of all yearbooks prior to the current year, and also those of the current year not regularly mailed to members in exchange for their dues, is in the hands of the publishers, not of the secretary. For such commercial sales, communicate directly with the Public School Publishing Company, Bloomington, Illinois, who will gladly send a price list covering all the publications of this Society and of its predecessor, the National Herbart Society.

9. **Yearbooks.** The yearbooks are issued in parts (usually two) from one to four months before the February meeting. They comprise from 300 to 800 pages annually. Unusual effort has been made to make them, on the one hand, of immediate practical value, and on the other hand, representative of sound scholarship and scientific investigation. Many of them are the fruit of coöperative work by committees of the Society.

10. **Meetings.** The annual meetings, at which the yearbooks are dis-

cussed, are held in February at the same time and place as the meeting of the Department of Superintendence of the National Education Association.

Applications for membership will be handled promptly at any time on receipt of name and address, together with check for the appropriate amount ($3.50 for new active membership, $2.50* for new associate membership). Generally speaking, applications entitle the new member to the Yearbooks slated for discussion during the calendar year the application is made, but those received in December are regarded as pertaining to the next calendar year.

GUY M. WHIPPLE, Secretary-Treasurer.

10 Putnam Street,
Danvers, Mass.

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*The dues of associate members will presumably be increased to $2.00 on March 1, 1929. Associate membership will then cost $3.00 the first year.

PUBLICATIONS OF THE NATIONAL HERBART SOCIETY

(Now the National Society for the Study of Education)

	Postpaid Price
First Yearbook, 1895	$0.79
First Supplement to First Yearbook	.28
Second Supplement to First Yearbook	.27
Second Yearbook, 1896	.85
Supplement to Second Yearbook	.27
Third Yearbook, 1897	.85
Note—Ethical Principles Underlying Education, John Dewey. Reprinted from Third Yearbook	.27
Supplement to Third Yearbook	.27
Fourth Yearbook, 1898	.79
Supplement to Fourth Yearbook	.28
Fifth Yearbook, 1899	.79
Supplement to Fifth Yearbook	.54

PUBLICATIONS OF THE NATIONAL SOCIETY FOR THE STUDY OF EDUCATION

	Postpaid Price
First Yearbook, 1902, Part I—Some Principles in the Teaching of History. Lucy M. Salmon	$0.54
First Yearbook, 1902, Part II—The Progress of Geography in the Schools. W. M. Davis and H. M. Wilson	.53
Second Yearbook, 1903, Part I—The Course of Study in History in the Common School. Isabel Lawrence, C. A. McMurry, Frank McMurry, E. C. Page, and E. J. Rice	.53
Second Yearbook, 1903, Part II—The Relation of Theory to Practice in Education. M. J. Holmes, J. A. Keith, and Levi Seeley	.53
Third Yearbook, 1904, Part I—The Relation of Theory to Practice in the Education of Teachers. John Dewey, Sarah C. Brooks, F. M. McMurry, *et al*	.53
Third Yearbook, 1904, Part II—Nature Study. W. S. Jackman	.85
Fourth Yearbook, 1905, Part I—The Education and Training of Secondary Teachers. E. C. Elliott, E. G. Dexter, M. J. Holmes, *et al*	.85
Fourth Yearbook, 1905, Part II—The Place of Vocational Subjects in the High-School Curriculum. J. S. Brown, G. B. Morrison, and Ellen H. Richards	.53
Fifth Yearbook, 1906, Part I—On the Teaching of English in Elementary and High Schools. G. P. Brown, and Emerson Davis	.53
Fifth Yearbook, 1906, Part II—The Certification of Teachers. E. P. Cubberley	.64
Sixth Yearbook, 1907, Part I—Vocational Studies for College Entrance. C. A. Herrick, H. W. Holmes, T. de Laguna, V. Prettyman, and W. J. S. Bryan	.70
Sixth Yearbook, 1907, Part II—The Kindergarten and Its Relation to Elementary Education. Ada Van Stone Harris, E. A. Kirkpatrick, Maria Kraus-Boelté, Patty S. Hill, Harriette M. Mills, and Nina Vandewalker	.70
Seventh Yearbook, 1908, Part I—The Relation of Superintendents and Principals to the Training and Professional Improvement of Their Teachers. Charles D. Lowry	.78
Seventh Yearbook, 1908, Part II—The Co-ordination of the Kindergarten and the Elementary School. B. J. Gregory, Jennie B. Merrill, Bertha Payne, and Margaret Giddings	.78
Eighth Yearbook, 1909, Parts I and II—Education with Reference to Sex. C. R. Henderson, and Helen C. Putnam. Both parts	1.60
Ninth Yearbook, 1910, Part I—Health and Education. T. D. Wood	.85
Ninth Yearbook, 1910, Part II—The Nurse in Education. T. D. Wood, *et al*	.78
Tenth Yearbook, 1911, Part I—The City School as a Community Center. H. C. Leipziger, Sarah E. Hyre, R. D. Warden, C. Ward Crampton, E. W. Stitt, E. J. Ward, Mrs. E. C. Grice, and C. A. Perry	.78
Tenth Yearbook, 1911, Part II—The Rural School as a Community Center. B. H. Crocheron, Jessie Field, F. W. Howe, E. C. Bishop, A. B. Graham, O. J. Kern, M. T. Scudder, and B. M. Davis	.79
Price for Yearbooks VI to X inclusive, 8 vo. cloth	5.00
Eleventh Yearbook, 1912, Part I—Industrial Education: Typical Experiments Described and Interpreted. J. F. Barker, M. Bloomfield, B. W. Johnson, P. Johnson, L. M. Leavitt, G. A. Mirick, M. W. Murray, C. F. Perry, A. L. Safford, and H. B. Wilson	.85
Eleventh Yearbook, 1912, Part II—Agricultural Education in Secondary Schools. A. C. Monahan, R. W. Stimson, D. J. Crosby, W. H. French, H. F. Button, F. R. Crane, W. R. Hart, and G. F. Warren	.85

Twelfth Yearbook, 1913, Part I—The Supervision of City Schools. Franklin Bobbitt, J. W. Hall, and J. D. Wolcott ..... .85

Twelfth Yearbook, 1913, Part II—The Supervision of Rural Schools. A. C. Monahan, L. J. Hanifan, J. E. Warren, Wallace Lund, U. J. Hoffman, A. S. Cook, E. M. Rapp, Jackson Davis, and J. D. Wolcott ..... .85

Thirteenth Yearbook, 1914, Part I—Some Aspects of High-School Instruction and Administration. H. C. Morrison, E. R. Breslich, W. A. Jessup, and L. D. Coffman ..... .85

Thirteenth Yearbook, 1914, Part II—Plans for Organizing School Surveys, with a Summary of Typical School Surveys. Charles H. Judd, and Henry L. Smith ..... .79

Fourteenth Yearbook, 1915, Part I—Minimum Essentials in Elementary School Subjects—Standards and Current Practices. H. B. Wilson, H. W. Holmes, F. E. Thompson, R. G. Jones, S. A. Courtis, W. S. Gray, F. N. Freeman, H. C. Pryor, J. F. Hosic, W. A. Jessup, and W. C. Bagley ..... .85

Fourteenth Yearbook, 1915, Part II—Methods for Measuring Teachers' Efficiency. Arthur C. Boyce ..... .79

Fifteenth Yearbook, 1916, Part I—Standards and Tests for the Measurement of the Efficiency of Schools and School Systems. G. D. Strayer, Bird T. Baldwin, B. R. Buckingham, M. R. Trabue, F. W. Ballou, D. C. Bliss, H. G. Childs, S. A. Courtis, E. P. Cubberley, C. H. Judd, George Melcher, E. E. Oberholtzer, J. B. Sears, Daniel Starch, and G. M. Whipple ..... .85

Fifteenth Yearbook, 1916, Part II—The Relationship Between Persistence in School and Home Conditions. Charles E. Holley ..... .87

Fifteenth Yearbook, 1916, Part III—The Junior High School. Aubrey A. Douglass ..... .85

Sixteenth Yearbook, 1917, Part I—Second Report of The Committee on Minimum Essentials in Elementary-School Subjects. W. C. Bagley, W. W. Charters, F. N. Freeman, W. S. Gray, Ernest Horn, J. H. Hoskinson, W. S. Monroe, C. F. Munson, H. C. Pryor, L. W. Rapeer, G. M. Wilson, and H. B. Wilson .. 1.00

Sixteenth Yearbook, 1917, Part II—The Efficiency of College Students as Conditioned by Age at Entrance and Size of High School. B. F. Pittenger ..... .85

Seventeenth Yearbook, 1918, Part I—Third Report of the Committee on Economy of Time in Education. W. C. Bagley, B. B. Bassett, M. E. Branom, Alice Camerer, J. E. Dealey, C. A. Ellwood, E. B. Greene, A. B. Hart, J. F. Hosic, E. T. Housh, W. H. Mace, L. R. Marston, H. C. McKown, H. E. Mitchell, W. C. Reavis, D. Snedden, and H. B. Wilson ..... .85

Seventeenth Yearbook, 1918, Part II—The Measurement of Educational Products. E. J. Ashbaugh, W. A. Averill, L. P. Ayres, F. W. Ballou, Edna Bryner, B. R. Buckingham, S. A. Courtis, M. E. Haggerty, C. H. Judd, George Melcher, W. S. Monroe, E. A. Nifenecker, and E. L. Thorndike 1.00

Eighteenth Yearbook, 1919, Part I—The Professional Preparation of High-School Teachers. G. N. Cade, S. S. Colvin, Charles Fordyce, H. H. Foster, T. W. Gosling, W. S. Gray, L. V. Koos, A. R. Mead, H. L. Miller, F. C. Whitcomb, and Clifford Woody 1.65

Eighteenth Yearbook, 1919, Part II—Fourth Report of Committee on Economy of Time in Education. F. C. Ayer, F. N. Freeman, W. S. Gray, Ernest Horn, W. S. Monroe, and C. E. Seashore 1.10

Nineteenth Yearbook, 1920, Part I—New Materials of Instruction. Prepared by the Society's Committee on the Materials of Instruction 1.10

Nineteenth Yearbook, 1920, Part II—Classroom Problems in the Education of Gifted Children. T. S. Henry 1.00

Twentieth Yearbook, 1921, Part I—New Materials of Instruction. Second Report by the Society's Committee 1.30

Twentieth Yearbook, 1921, Part II—Report of the Society's Committee on Silent Reading. M. A. Burgess, S. A. Courtis, C. E. Germane, W. S. Gray, H. A. Greene, Regina R. Heller, J. H. Hoover, J. A. O'Brien, J. L. Packer, Daniel Starch, W. W. Theisen, G. A. Yoakum, and representatives of other school systems 1.10

Twenty-First Yearbook, 1922, Parts I and II—Intelligence Tests and Their Use. Part I—The Nature, History, and General Principles of Intelligence Testing. E. L. Thorndike, S. S. Colvin, Harold Rugg, G. M. Whipple. Part II—The Administrative Use of Intelligence Tests. H. W. Holmes, W. K. Layton, Helen Davis, Agnes L. Rogers, Rudolph Pintner, M. R. Trabue, W. S. Miller, Bessie L. Gambrill, and others. The two parts are bound together 1.60

Twenty-Second Yearbook, 1923, Part I—English Composition: Its Aims, Methods, and Measurement. Earl Hudelson 1.10

Twenty-Second Yearbook, 1923, Part II—The Social Studies in the Elementary and Secondary School. A. S. Barr, J. J. Coss, Henry Harap, R. W. Hatch, H. C. Hill, Ernest Horn, C. H. Judd, L. C. Marshall, F. M. McMurry, Earle Rugg, H. O. Rugg, Emma Schweppe, Mabel Snedaker, and C. W. Washburne. 1.50

Twenty-Third Yearbook, 1924, Part I—The Education of Gifted Children. Report of the Society's Committee, Guy M. Whipple, Chairman 1.75

Twenty-Third Yearbook, 1924, Part II—Vocational Guidance and Vocational Education for Industries. A. H. Edgerton and others 1.75

Twenty-Fourth Yearbook, 1925, Part I—Report of the National Committee on Reading. W. S. Gray, Chairman; F. W. Ballou, Rose L. Hardy, Ernest Horn, Frances Jenkins, S. A. Leonard, Estaline Wilson, and Laura Zirbes... 1.50

Twenty-Fourth Yearbook, 1925, Part II—Adapting the Schools to Individual Differences. Report of the Society's Committee. Carleton W. Washburne, Chairman 1.50

Twenty-Fifth Yearbook, 1926, Part I—The Present Status of Safety Education. Report of the Society's Committee. Guy M. Whipple, Chairman..... 1.75

Twenty-Fifth Yearbook, 1926, Part II—Extra-Curricular Activities. Report of the Society's Committee. Leonard V. Koos, Chairman..... 1.50

Twenty-Sixth Yearbook, 1927, Part I—Curriculum Making: Past and Present. Report of the Society's Committee. Harold O. Rugg, Chairman..... 1.75

Twenty-Sixth Yearbook, 1927, Part II—The Foundations of Curriculum Making. Prepared by individual members of the Society's Committee. Harold O. Rugg, Chairman 1.50

Twenty-Seventh Yearbook, 1928, Part I—Nature and Nurture: Their Influence Upon Intelligence. Prepared by the Society's Committee. Lewis M. Terman, Chairman 1.75

Twenty-Seventh Yearbook, 1928, Part II—Nature and Nurture: Their Influence Upon Achievement. Prepared by the Society's Committee. Lewis M. Terman, Chairman 1.75

Twenty-Eighth Yearbook, 1929, Parts I and II—Preschool and Parental Education. Part I—Organization and Development. Part II—Research and Method. Prepared by the Society's Committee. Dr. Lois H. Meek, Chairman. Bound in one volume. Cloth Edition (plus postage)..... 3.60
Paper Edition (plus postage)..... 3.00

PUBLIC SCHOOL PUBLISHING COMPANY, BLOOMINGTON, ILLINOIS
Agents—The Baker and Taylor Company New York

BOUND VOLUMES
OF
THE YEARBOOKS OF THE SOCIETY
I-XXIX

The yearbooks of the National Society for the Study of Education form the outstanding feature of its activities. In the earlier days of the Society these publications were comparatively small in size, though not in importance of their topics or in authoritativeness of their producers. From the first, the policy was adopted of issuing the yearbooks in advance of the meeting at which they were to be discussed. As long as the membership of the Society was limited to a small group of active participants, the annual meetings were perhaps of even more importanee than the printed material which formed the subject matter for discussion. But as the Society's membership increased and as the number of nonmembers attracted to its meetings also increased, the difficulty of holding these intimate discussions likewise increased, the meetings gradually shifted in character, so that the formal presentation of addresses came to assume more, and the discussions less importance —a change which many members deplored, but which it has seemed impossible to avoid. At the same time, the commercial sales of yearbooks not distributed to members in return for their dues correspondingly increased and gradually affected the functions of the Society in ways that could hardly have been foreseen at the outset. More particularly, the financial returns from the sales of its yearbooks have produced for the Society a source of income which has increased like the proverbial snowball, and which has brought it about that the Society is to-day in some respects more nearly a publishing society than a society for the holding of meetings and discussion of educational topics. In other words, the production and distribution of its yearbooks, rather than the holding of its annual meetings, has come to be the chief method by which the Society is now influencing the trend of educational thinking and practice. As will be seen by a glance at the statements given in the annual reports of the Secretary, the sums now available to the Society from the sale of its yearbooks have reached very considerable proportions. The policy of the officers of the Society has been consistently to return these profits to the members of the Society,

partly by issuing yearbooks that often cost most to deliver to its members than the dues received in return, partly by subsidizing more effectively the work of the various committees that are at work upon the production of forthcoming yearbooks.

All in all, then, the yearbooks of the National Society for the Study of Education are in many respects a feature unique among educational organizations. As to their intrinsic worth as educational documents, there need be no argument; their ready sale, the repeated requests for permission to quote from their pages, and the numerous enthusiastic unsolicited endorsements from our members are sufficient testimony.

SUMMARY OF YEARBOOKS I-XXIX

The following is a list of the fifty-six books published to date (1930) together with the names of the contributors and a brief synopsis of the contents of each book. Perusal of this summary will show the scope and importance of the Society's publications.

VOLUME ONE

THE FIRST YEARBOOK, PART I (1902)

SOME PRINCIPLES IN THE TEACHING OF HISTORY

Lucy M. Salmon

This first yearbook of the Society is a concise and stimulating discussion of the principles underlying the teaching of history. The author devotes various sections of the paper to a discussion of the place of the sources in the school course, the historian in relation to the selection of materials, the relation of history to other subjects, and changes in the methods of teaching it. The concluding section gives an outline of the history recommended for use in the twelve grades.

THE FIRST YEARBOOK, PART II (1902)

THE PROGRESS OF GEOGRAPHY IN THE SCHOOLS

W. M. Davis and H. M. Wilson

Some of the best principles which govern the teaching of geography to-day are set forth in this early yearbook of the Society. Mr. Davis, the author of the major portion of the volume, deplores the deficiency of higher learning in the field, urges better training of teachers in the subject matter, stresses the need of subordinating detailed items to general principles, points out the importance of showing causal relations in teaching the subject, and advocates better and more extensive use of equipment of geographical laboratories. Some space is devoted to a discussion of ontography, systematic and regional physi-

ography, and systematic and regional geography, with brief reference to their places in the curriculum. The concluding chapter, by Mr. Wilson, discusses the relation of geography to the sciences.

THE SECOND YEARBOOK, Part I (1903)

The Course of Study in History in the Common Schools

Isabel Lawrence, Charles A. McMurry, Frank McMurry, Edward C. Page, and Emily J. Rice

The major portion of this yearbook is devoted to a course of study in history for grades three to eight inclusive, prepared by Charles A. McMurry. Particular recognition is given to the intimate relation between history and reading and geography. A brief course in geography is outlined for use with the subject matter in history and reading. The final chapters of the volume are a series of interesting papers discussing Miss Salmon's presentation of the principles of teaching history, which appeared as Part I of the First Yearbook.

THE SECOND YEARBOOK, Part II (1903)

The Relation of Theory to Practice in Education

David Felmley, Manfred J. Holmes, John A. Keith, and Levi Seeley

Under the chairmanship of John A. Keith, a committee of the Society undertook a careful study of the relation of theory to practice in education in (a) universities, (b) normal schools, and (c) city training schools. The plans of the committee embraced a historical account of earlier procedure in each of these types of institutions, an account of contemporary procedure, an investigation of the most effective relation of theory to practice under various forms of institutional organization, and a study of the relative values and essentials of some nine fields of subject matter offered in those institutions. This yearbook is devoted largely to the Committee's report on the situation in the normal schools.

THE THIRD YEARBOOK, Part I (1904)

The Relation of Theory to Practice in the Education of Teachers

Sarah C. Brooks, John Dewey, C. H. Farnsworth, F. M. McMurry, G. R. Richards, D. E. Smith, and T. D. Wood

This yearbook consists of three sections: (1) a paper by John Dewey, entitled "The Relation of Theory to Practice in Education," (2) further treatment of the same topic in a paper by Sarah C. Brooks, and (3) a description of the "Theory and Practice at Teachers College, Columbia University" by the remaining contributors. The secretary's report, referring to the meeting at which this yearbook was discussed, states: "The entire time was devoted to the discussion of Dr. John Dewey's paper. . . . This paper stirred up a good deal of vigorous thinking and provoked a great deal of highly valuable discussion." Dr. Dewey pointed out the artificiality of the conditions under which so-called practice is secured in those situations where young teachers gain

their experience by taking immediate control of a room under the observation of a superior supervisory officer. As a substitute for this method, he proposed that while the student was acquiring his knowledge of subject matter, theory, and principles, he should devote long periods to the observation of both skilled teachers and children at work in the classroom. This was to be followed by an assistantship to the teacher, which should lead gradually to experience in actual teaching.

THE THIRD YEARBOOK, PART II (1904)

NATURE STUDY

Wilbur S. Jackman

The author of this yearbook has three objects in mind: to show (1) that nature study must be presented in accordance with the general principles of psychology which apply to all other subjects; (2) that it is necessary to start with broad, general views or pictures of nature and proceed gradually to the details; and (3) that nature study forms but a part of education, since its relationships reach into all other subjects which go to make up the whole. He suggests salient centers of subject matter and points out principles of method, carrying through the whole a due regard for the needs of the young and growing mind. The book is illustrated and contains a suggestive course of study.

THE FOURTH YEARBOOK, PART I (1905)

THE EDUCATION AND TRAINING OF SECONDARY TEACHERS

S. D. Brooks, J. F. Brown, J. S. Brown, C. DeGarmo, E. G. Dexter, E. C. Elliott, C. B. Gilbert, G. S. Hall, R. P. Halleck, M. J. Holmes, E. J. James, L. H. Jones, L. C. Lord, A. F. Nightingale, M. V. O'Shea, H. H. Seerley, C. C. Van Liew, and J. N. Wilkinson

The two central problems of this yearbook are: (1) What constitutes the ideal secondary teacher?; and (2) By what selective process and preparation can the realization of this ideal be promoted? These problems are considered under five divisions: (1) an historical sketch, which seeks to trace briefly the genesis of secondary schools in their relation to the life of the people; (2) a presentation of the opinions of five experienced secondary-school men as to what constitutes the ideal secondary-school teacher; (3) an examination of the status and personnel of secondary teachers in the United States; (4) a survey of the provisions for the preparation of secondary-school teachers made by universities, normal schools, and colleges; and (5) a consensus of opinion as to the relative advantages and limitations of universities and normal schools in preparing secondary-school teachers.

THE FOURTH YEARBOOK, PART II (1905)

THE PLACE OF VOCATIONAL SUBJECTS IN THE HIGH-SCHOOL CURRICULUM

J. Stanley Brown, Gilbert B. Morrison, and Ellen H. Richards

Three main groups of vocational studies have been treated in this yearbook: commercial work, manual training, and domestic science. These topics

are discussed in relation to their then present status, and their possibilities for future development. The concluding chapters of the book are devoted to a discussion of Part I of the Fourth Yearbook.

VOLUME TWO

THE FIFTH YEARBOOK, Part I (1906)

On the Teaching of English in Elementary and High Schools

George P. Brown and Emerson Davis

This yearbook opens with a theoretical dissertation on what Mr. Brown considers the philosophical background for the efficient teaching of English. From this he proceeds to a more practical discussion of methods of teaching English in the primary and grammar grades and in the high school. The latter part of the book describes the course of study in English in the primary grades of the public schools of Cleveland.

THE FIFTH YEARBOOK, Part II (1906)

The Certification of Teachers

Ellwood P. Cubberley

This yearbook sets forth in some detail the conditions prevailing in 1906 with reference to the certification of teachers, traces the development of certain tendencies relating to the problem, and offers suggestions as to lines along which improvement might be made.

THE SIXTH YEARBOOK, Part I (1907)

Vocational Studies for College Entrance

W. J. S. Bryan, C. A. Herrick, H. W. Holmes, T. de Laguna, and V. Prettyman

Continuing the discussion begun in Part II of the Fourth Yearbook, this yearbook takes up those aspects of vocational subjects relating to college entrance.

THE SIXTH YEARBOOK, Part II (1907)

The Kindergarten and Its Relation to Elementary Education

Ada Van Stone Harris, Patty S. Hill, E. A. Kirkpatrick, Maria Krause-Boelté, Harriette M. Mills, and Nina C. Vandewalker

This yearbook is devoted to an investigation of the relation between the kindergarten and elementary school. It was undertaken in order to further the effort to establish the kindergarten more firmly as a part of the public-school system by bridging the chasm which existed between it and the primary grades. It contains a résumé of Froebelian principles, a presentation of both the conservative and the progressive phases of kindergarten education, the history of kindergarten influence in elementary education, and a discussion of the evolution of the kindergarten program.

THE SEVENTH YEARBOOK, Part I (1908)

The Relation of Superintendents and Principals to the Training and Professional Improvement of Their Teachers

Charles D. Lowry

This yearbook is largely a summary of replies to a questionnaire sent to members of the Society and others, asking (1) for opinions as to the need for carrying on systematic work for training the teaching force to a higher degree of efficiency, and (2) for statements of the nature of such work in those schools in which it was carried on. The replies pointed to the conclusion that the greatest essential for a teacher's life and growth is vigorous, systematic study, preferably in courses under the direction of higher institutions of learning. Various plans for attaining this result are presented in this volume.

THE SEVENTH YEARBOOK, Part II (1908)

The Coördination of the Kindergarten and the Elementary School

Margaret Giddings, B. C. Gregory, Jennie B. Merrill, and Bertha Payne

"Supplement to Sixth Yearbook, Part II" is the secondary title of this yearbook. Following the somewhat theoretical discussion of the problem set forth in the earlier yearbook, this one attacks the more practical consideration of how to coördinate the work of the kindergarten and the school. It discusses ways and means of securing organic continuity between the two, shows how the right training of teachers may further the work of coördination, and sets forth the relation of supervision to the question at issue.

THE EIGHTH YEARBOOK, Part I (1909)

Education With Reference to Sex: Pathological, Economic, and Social Aspects

Charles Richmond Henderson

THE EIGHTH YEARBOOK, Part II (1909)

Education With Reference to Sex: Agencies and Methods

Charles Richmond Henderson and Helen C. Putnam

The two parts of the Eighth Yearbook are meant to be considered as a single study. In Part I of the study evidence, drawn from the testimonies and experiences of well-known physicians and social hygienists, is offered to reveal the urgent need for instructing youth in sex hygiene. Part II gives practical suggestions to parents and teachers regarding formal instruction in matters of sex. The study concludes with a helpful paper by Dr. Putnam, entitled "Sex Instructiou in the Schools," which is devoted chiefly to showing how this instruction may be presented in the school naturally and wholesomely in connection with biology.

VOLUME THREE

THE NINTH YEARBOOK, PART I (1910)

HEALTH AND EDUCATION

Thomas Denison Wood

A brief synopsis is given in this yearbook of the different phases of educational administration, supervision, and instruction which have to do with health. It treats of health examinations, school sanitation, the hygiene of instruction, health instruction, and physical education. A helpful bibliography concludes the volume.

THE NINTH YEARBOOK, PART II (1910)

THE NURSE IN EDUCATION

M. Adeline Nutting, Mary L. Read, Isabel M. Stewart, and Thomas D. Wood

Supplementing the discussion in Part I, this volume is devoted to the rôle in education of the professionally trained nurse. It presents some of the important results attained in this field, outlines the scope and possibilities of the work, suggests the relationship of the nurse to the community, and indicates the coördination of the nurse's work with that of parent, regular teacher, school physician, teacher of physical education, and other special teachers whose particular subjects bring them into relation with the health side of education.

THE TENTH YEARBOOK, PART I (1911)

THE CITY SCHOOL AS A COMMUNITY CENTER

C. W. Crampton, Mrs. E. C. Grice, Mrs. S. E. Hyre, H. C. Leipziger, C. A. Perry, E. W. Stitt, E. J. Ward, and R. D. Warden

The contributors to this volume have described in a concrete way the extent and character of experiments carried on under their direction for making the school a community center. They include in their discussion methods employed, results secured, concrete incidents, difficulties, criticisms, and suggestions encountered in their experiments, together with comparisons of similar work conducted in other communities.

THE TENTH YEARBOOK, PART II (1911)

THE RURAL SCHOOL AS A COMMUNITY CENTER

E. C. Bishop, B. H. Crocheron, B. M. Davis, Jessie Field, A. B. Graham, F. W. Howe, O. J. Kern, and M. T. Scudder

This volume supplements Part I, and treats in a similar manner the problems and considerations involved in making the rural school a community center. It concludes with a bibliography on city and rural schools as social centers.

THE ELEVENTH YEARBOOK, PART I (1912)

INDUSTRIAL EDUCATION: TYPICAL EXPERIMENTS DESCRIBED AND INTERPRETED

J. F. Barker, M. Bloomfield, B. W. Johnson, P. Johnston, L. M. Leavitt, G. A. Mirick, M. W. Murray, C. F. Perry, A. L. Safford, and H. B. Wilson

In this yearbook an attempt is made to bring together accounts of actual progress made in organizing schools for industrial education, to interpret the various lines of experimentation undertaken, and to demonstrate practical possibilities. Each contributor was requested to describe the history, organization, and results of industrial education in his school, to compare his with other schools of the same type, and to show how his particular type of undertaking might contribute toward the whole problem of industrial education. (See the Twenty-Third Yearbook, Part II, for further treatment of this topic.)

THE ELEVENTH YEARBOOK, PART II (1912)

AGRICULTURAL EDUCATION IN SECONDARY SCHOOLS

H. F. Button, F. R. Crance, D. J. Crosby, W. H. French, W. R. Hart, A. C. Monahan, R. W. Stimson, and G. F. Warren

The aim of this yearbook was to present accounts of what was actually being done in secondary agricultural training in various parts of the United States at the time it was prepared. It represents an analysis of the typical experiments which were under way at that time, and gives some interpretation of each plan and its results.

THE TWELFTH YEARBOOK, PART I (1913)

THE SUPERVISION OF CITY SCHOOLS

Franklin Bobbitt, John W. Hall, and J. D. Wolcott

Professor Bobbitt, who contributes the major portion of this yearbook, treats the question of supervision under seven main heads, the most important of which are: the need for definite standards of achievement (with special reference to achievement tests); the necessity of determining under actual conditions the most efficient methods for actual service, and then insisting upon them; the importance of standard qualifications for teachers, with some account of a rating scale; the need for standard preliminary training of teachers; the need for training during service; and the importance of defining for teachers the extent, standards, and methods of work that are expected. The appendix, by Professor Hall, gives an account of the supervision of beginning teachers in Cincinnati. Mr. Wolcott contributes a bibliography on city-school supervision.

THE TWELFTH YEARBOOK, PART II (1913)

THE SUPERVISION OF RURAL SCHOOLS

A. S. Cook, J. Davis, L. J. Hanifan, U. J. Hoffman, W. Lund, A. C. Monahan, E. M. Rapp, J. E. Warren, and J. D. Wolcott

This is the third yearbook of the National Society to deal with an important phase of the administration of rural schools. The several authors

give accounts of what was actually being achieved in typical situations in various parts of the United States at the time the yearbook appeared.

VOLUME FOUR

THE THIRTEENTH YEARBOOK, Part I (1914)

Some Aspects of High-School Instruction and Administration

E. R. Breslich, L. D. Coffman, W. A. Jessup, and H. C. Morrison

The three sections of this yearbook are devoted to a discussion of reconstructed mathematics, supervised study, and North Central High Schools, respectively. The first discusses very concretely needed re-adjustments in the subject of mathematics. The second presents the fundamental principles at the basis of the movement for supervised study, together with a review of the experiments that had been tried in various parts of the country. The last paper shows that a clear understanding of existing conditions with respect to the quality of the teaching staff is one of the most important steps in the direction of reconstruction of the subjects of the curriculum.

THE THIRTEENTH YEARBOOK, Part II (1914)

Plans for Organizing School Surveys, with a Summary of Typical School Surveys

Charles H. Judd and Henry L. Smith

The first paper in this volume treats the problem of school surveys from three angles: the conditions necessitating careful study of local school situations; the forces that can most safely and profitably be intrusted with making local surveys; and a possible method of approach to the problem in cities of from five to fifty thousand inhabitants. The second paper, by Professor Judd, includes accounts of all major surveys up to 1914, and gives a view of the different types of such inquiries.

THE FOURTEENTH YEARBOOK, Part I (1915)

Minimum Essentials in Elementary-School Subjects—Standards and Current Practices

W. C. Bagley, S. A. Courtis, F. N. Freeman, W. S. Gray, H. W. Holmes, J. F. Hosic, W. A. Jessup, R. G. Jones, H. C. Pryor, F. E. Thompson, and H. B. Wilson

This yearbook is the 1915 report of investigators coöperating with the Committee of the Department of Superintendence of the National Education Association on Economy of Time in Education, H. B. Wilson, chairman. Three other important yearbooks of the Society (XVI, Part I; XVII, Part I; and XVIII, Part II) are devoted to the subsequent reports of this important committee. This report has to do with means of developing a program for economizing time in the elementary school. A general survey is presented, showing how time is at present distributed in representative cities and describing typical experiments for gaining economy. The bulk of the report

deals with minimal standards in reading, handwriting, spelling, composition, grammar, arithmetic, geography, history, and literature, and represents a series of efforts by different contributors to determine for these subjects just what topics or aspects are truly essential.

THE FOURTEENTH YEARBOOK, PART II (1915)

METHODS FOR MEASURING TEACHERS' EFFICIENCY

Arthur C. Boyce

The author of this monograph calls attention first to the need for rating teachers and to the many inadequacies of the schemes for rating that are in common use. To meet this need and overcome these weaknesses, he proposes a method for rating which features a selected list of traits, a careful definition of these traits, and a graphic method for doing the rating. He also sets forth the results obtained by his method and discusses the relative importance of the several qualities of merit in teachers. Mr. Boyce's rating scale has attracted much attention and, in its original form or with variations, has been employed in the rating of large numbers of teachers.

THE FIFTEENTH YEARBOOK, PART I (1916)

STANDARDS AND TESTS FOR THE MEASUREMENT OF THE EFFICIENCY OF SCHOOLS AND SCHOOL SYSTEMS

B. T. Baldwin, F. W. Ballou, D. C. Bliss, B. R. Buckingham, H. G. Childs, S. A. Courtis, E. P. Cubberley, C. H. Judd, George Melcher, E. E. Oberholtzer, J. B. Sears, Daniel Starch, G. D. Strayer, M. R. Trabue, and G. M. Whipple

This volume is the report of the Committee of the National Council of Education of the National Education Association, under the chairmanship of G. D. Strayer, assisted by several invited collaborators. The fifteen chapters are grouped into two sections. Section I deals with the derivation of scales and units of measurement, including scales for physical growth and for arithmetic, score cards for city school buildings, and completion tests for school use. Section II deals with the application of scales and units of measurement in the work of educational supervision and administration. Among the systems from which accounts of the use of measuring scales are reported are Boston; Montclair; Bloomington, Indiana; Detroit; Salt Lake City; Kansas City, Missouri; Tulsa, Oklahoma; Oakland, California; Cleveland, Ohio; and Madison, Wisconsin.

VOLUME FIVE

THE FIFTEENTH YEARBOOK, PART II (1916)

THE RELATIONSHIP BETWEEN PERSISTENCE IN SCHOOL AND HOME CONDITIONS

Charles E. Holley

The author of this monograph investigated on a fairly comprehensive scale the question: What factors determine the number of years of schooling

received by pupils in the public schools? Among the conclusions reached are these: (1) There is a high correlation between the general cultural advantages of a home and the schooling the children will receive. (2) Environmental influences more often cause a child to stop attending school than lack of ability. (3) Early elimination from school is largely due to factors over which the school has little or no control. (4) High schools are largely attended by the children of the "better class." (5) Marriages are distinctly affected by "educational selection." (6) A family tradition of schooling is effective in inducing unusual persistence in school in some cases.

THE FIFTEENTH YEARBOOK, Part III (1916)

The Junior High School

Aubrey A. Douglass

This monograph, which is accompanied by a bibliography of 173 titles, presents an excellent account of the junior high school as it existed in 1916. In the Appendix, particularly, will be found a general summary of the situation based on information from 100 American cities. The body of the volume discusses the general problems involved, the arguments for and against this type of school, its curriculum, its housing, and the characteristics of adolescence that it attempts to meet and utilize.

THE SIXTEENTH YEARBOOK, Part I (1917)

Second Report of the Committee on Minimal Essentials in Elementary-School Subjects

W. C. Bagley, W. W. Charters, F. N. Freeman, W. S. Gray, Ernest Horn, J. H. Hoskinson, W. S. Monroe, C. F. Munson, H. C. Pryor, L. W. Rapeer, G. M. Wilson, and H. B. Wilson

This yearbook is the 1917 report of investigators coöperating with the Committee on Economy of Time of the Department of Superintendence of the National Education Association, H. B. Wilson, chairman, and is the second printed report of that committee. It contains a further report on every subject discussed in the first report (Fourteenth Yearbook, Part I) and also a preliminary report on physical education. In this report the emphasis is upon the social value of the content of the several school subjects as a basis for the instruction given in them.

THE SIXTEENTH YEARBOOK, Part II (1917)

The Efficiency of College Students as Conditioned by Age at Entrance and Size of High School

B. F. Pittenger

The author of this monograph sought by statistical methods to answer two questions: Is the quality of work done by college students affected by the age at which they enter or by the size of the high school from which they come? His results, based on a study of 828 students at the University of Minnesota, show, among other things, (1) that those entering before 18 years

of age did better work than those who entered at 18 or later, (2) that graduates of public schools did better work than graduates of military, private, or church schools, (3) that graduates of large schools did better work than graduates of small schools, (4) that the women did better work than the men, and (5) that elimination from the college, especially in the freshman year, is highly qualitative, in that the good studeuts tend to remain and the poor ones to leave.

THE SEVENTEENTH YEARBOOK, PART I (1918)

THIRD REPORT OF THE COMMITTEE ON ECONOMY OF TIME IN EDUCATION

W. C. Bagley, B. B. Bassett, M. E. Branom, Alice Camerer, J. E. Dealey, C. A. Ellwood, E. B. Greene, A. B. Hart, J. F. Hosic, E. T. Housh, W. H. Mace, L. R. Marston, H. C. McKown, A. E. Mitchell, W. C. Reavis, D. Snedden, and H. B. Wilson

This is the 1918, or third (printed) report of the Committee of the Department of Superintendence of the National Education Association on Economy of Time in Education, and is prepared by various coöperating investigators. Like the first and second reports, printed as yearbooks of this Society, it deals primarily with studies concerning the minimal essentials of various elementary-school subjects, including arithmetic, geography, reading, composition, civics, and history. A special feature of this report is a symposium on the purposes of historical instruction in the seventh and eighth grades, arranged by W. C. Bagley, and contributed to by Professors Dealey, Ellwood, Greene, Hart, Mace, and Snedden. With the exception of this symposium, the various articles in this yearbook deal with actual investigations of the content of the curriculum, especially in its relation to the needs of daily life.

VOLUME SIX

THE SEVENTEENTH YEARBOOK, PART II (1918)

THE MEASUREMENT OF EDUCATIONAL PRODUCTS

E. J. Ashbaugh, W. A. Averill, L. P. Ayres, F. W. Ballou, Edna Bryner, B. R. Buckingham, S. A. Courtis, M. E. Haggerty, C. H. Judd, George Melcher, W. S. Monroe, E. A. Nifenecker, and E. L. Thorndike

The writers of this yearbook prepared it as representatives of the National Association of Directors of Educational Research (now the Educational Research Association) with the intent "to gather into one handy volume a rather complete statement of the various aspects of a new movement which seems destined to have a profound and permanent influence upon American Education." From the ready reception accorded the yearbook, it is not too much to say that this "rather complete statement" had, itself, a quite considerable influence in furthering the movement for educational measurement. Among the topics considered were: the history of educational measurement, the nature and purposes of such measurement, the organization of bureaus of research, a list of existiug tests and scales, an exposition of statistical terms and methods, aud suggestions for future development.

THE EIGHTEENTH YEARBOOK, PART I (1919)

THE PROFESSIONAL PREPARATION OF HIGH-SCHOOL TEACHERS

G. N. Cade, S. S. Colvin, Charles Fordyce, H. H. Foster, T. W. Gosling, W. S. Gray, L. V. Koos, A. R. Mead, H. L. Miller, F. C. Whitcomb, and Clifford Woody

The first 160 pages of this "double number" are devoted to a description by H. L. Miller of the University of Wisconsin plan for the preparation of high-school teachers. Section II contains three chapters by Gosling, Colvin, Koos, and Woody on miscellaneous aspects of the problem of teacher-training. Section III, which the remaining contributors prepared, is a report of the Committee of the Society of College Teachers of Education on Practice Teaching for Secondary Teachers. The volume as a whole thus contains not only important analyses of prevailing conditions in the training of high-school teachers, but also suggestive accounts of several novel experiments looking toward the bettering of the deficiencies found to exist in the preparation of such teachers.

THE EIGHTEENTH YEARBOOK, PART II (1919)

REPORT ON ECONOMY OF TIME IN LEARNING: FOURTH REPORT OF COMMITTEE ON ECONOMY OF TIME IN EDUCATION

F. C. Ayer, F. N. Freeman, W. S. Gray, Ernest Horn, W. S. Monroe, C. E. Seashore, and H. B. Wilson

This group of investigators operated as a sub-committee of the committee that was responsible for three preceding yearbooks bearing similar titles. The group took as its task the formulation of rules, or recipes, by which economy could be secured in education, not by better selection of topics for instruction (stressed in the preceding reports), but by improved methods of teaching which had been selected. The yearbook, accordingly, takes the form of a series of statements of fundamental principles which investigation, or the best expert opinion, has shown should be followed in teaching writing, reading, spelling, arithmetic, drawing, and music. This 'meaty' report has been much quoted and decidedly influential.

VOLUME SEVEN

NINETEENTH YEARBOOK, PART I (1920)

NEW MATERIALS OF INSTRUCTION

A Committee of the Society was created in 1918 under the title "Committee on Materials of Education," which had for its members Messrs. W. C. Bagley, J. C. Brown, C. E. Chadsey, L. D. Coffman, E. P. Cubberley, E. C. Elliott, H. C. Morrison, G. D. Strayer, G. M. Whipple, and C. H. Judd, chairman. With the coöperation of numerous persons this Committee assembled as their first report detailed examples of new materials of instruction, particularly in the fields of reading, geography, history, nature study, mathematics, and community life. The Committee stressed the importance of inducing school boards to set aside each year a certain amount of instructional energy for the purpose

of making similar new materials of instruction. (For further discussion of this topic, see the Twentieth Yearbook, Part I.)

NINETEENTH YEARBOOK, Part II (1920)

Classroom Problems in the Education of Gifted Children

Theodore S. Henry

Dr. Henry summarized various types of flexible promotion schemes, described typical special rooms for gifted pupils, and then recounted at length the methods and results of an experimental room for gifted pupils organized at Urbana, Illinois. The closing chapters, in addition to a six-page bibliography, discuss the problem of adapting classroom methods to the training of gifted children, and present a series of eighteen specific recommendations for carrying on this type of educational endeavor. (For further discussion of this topic, see the Twenty-Third Yearbook, Part I.)

THE TWENTIETH YEARBOOK, Part I (1921)

Second Report of the Society's Committee on New Materials of Instruction

Frances Berry, Edna Keith, F. J. Kelly, W. N. Kerr, H. G. Lull, Nellie R. Olson, Nina Vandewalker, F. L. Whitney, and Numerous Collaborators

The Society's Committee (the same as that for the Nineteenth Yearbook, Part I), under the chairmanship of F. J. Kelly, appointed as sub-committee chairmen the persons listed above, who gathered and organized 295 detailed examples of new materials of instruction, and classified them for use in the kindergarten, the various elementary grades, the junior and the senior high school, and in special classes for the subnormal. These exercises, or 'projects,' all possess a degree of novelty and by the strong appeal they make to children are decidedly suggestive to teachers who are searching for material outside that of the regular textbooks or ordinary supplementary reading. This yearbook, like its predecessor on the same topic, may be regarded as a portion of the contribution made by this Society toward the reorganization of the curriculum.

THE TWENTIETH YEARBOOK, Part II (1921)

Report of the Society's Committee on Silent Reading

May A. Burgess, S. A. Courtis, C. E. Germane, W. S. Gray, H. A. Greene, Reginia R. Heller, J. H. Hoover, James A. O'Brien, J. L. Packer, Daniel Starch, W. W. Theisen, G. A. Yoakum, and Representatives of the School Systems of Cedar Rapids, Denver, Iowa City, and Racine

The Executive Committee of the Society appointed a Committee on Silent Reading, under the chairmanship of Earnest Horn, which gathered the material in this volume as its report. Section I comprises ten chapters concerned with investigations of various aspects of the problem of reading, as for instance, the difficulties encountered in teaching silent reading, the measurement of speed and comprehension of silent reading, the vocabularies and contents of readers, and the development of reading speed. Section II contains examples

of concrete exercises which have actually been tried in the classroom for teaching silent reading. This yearbook may be regarded as intermediate in scope and purpose between the several treatments of reading in the earlier yearbooks on minimal essentials and the economy of time and the elaborate treatment of reading in the Twenty-Fourth Yearbook, Part I.

VOLUME EIGHT

TWENTY-FIRST YEARBOOK, Parts I and II (1922)

Intelligence Tests and Their Use

S. S. Colvin, Helen Davis, Bessie L. Gambrill, Henry W. Holmes, W. K. Layton, W. S. Miller, Rudolph Pintner, Agnes L. Rogers, H. O. Rugg, M. R. Trabue, E. L. Thorndike, and G. M. Whipple

Under the chairmanship of the late S. S. Colvin, this Committee of the Society produced this yearbook of 270 pages in the attempt to explain "in a clear and accurate manner the theory, nature, and practical use of intelligence tests." Its two parts are bound in one cover. Part I treats of 'general intelligence,' its nature, how it may be measured, how mental tests have developed, and their essential characteristics. Part II treats in considerable detail "the administrative uses of intelligence tests in various grades, beginning with the primary grade and ending with the college and university." In addition to a wide circulation among schoolmen, this yearbook has been extensively used for purposes of instruction in normal schools and colleges.

TWENTY-SECOND YEARBOOK, Part I (1923)

English Composition: Its Aims, Methods, and Measurement

Earl Hudelson

By means of questionnaires the author sought to discover from teachers of English what their actual aims and methods were with respect to composition. He next considered the means employed for determining the extent to which these aims were being attained and was led to devise and to standardize two scales for the measurement of English composition. His principal contention is that most composition scales test only how well the pupil can write upon that particular topic, not how well he can possibly write. For the latter purpose he proposes his Maximal Composition Ability Scale. To determine accurately from time to time the extent to which the pupils are exercising their real ability, he proposes another device known as the Typical Composition Ability Scale. Detailed instructions are given for the use of these two scales.

TWENTY-SECOND YEARBOOK, Part II (1923)

The Social Studies in the Elementary and Secondary School

A. S. Barr, J. J. Coss, Henry Harap, R. W. Hatch, H. C. Hill, Ernest Horn, C. H. Judd, L. C. Marshall, F. M. McMurry, Earle Rugg, H. O. Rugg, Emma Schweppe, Mabel Snedaker, and C. W. Washburne

This group of writers, under the direction of H. O. Rugg, has presented in this 324-page yearbook important and somewhat radical proposals concerning

the portion of the curriculum devoted to the social studies. Section I analyzes current practices, shows how social science curricula came to be what they are, and points out needed changes. Section II presents samples of reorganized courses in this field in several schools. Section III discusses the method by which such reorganizations of the curriculum should be carried on. Section IV is a critical appraisal of F. M. McMurry of the proposed reorganizations. This volume may be regarded as one of several fore-runners of the proposed yearbooks on the Technique of Curriculum-Making. It applies, obviously, primarily to the geographical and historical portions of the curriculum.

VOLUME NINE

TWENTY-THIRD YEARBOOK, Part I (1924)

THE EDUCATION OF GIFTED CHILDREN

B. T. Baldwin, Helen Davis, Lillie R. Ernst, F. N. Freeman, T. S. Henry, Ernest Horn, H. O. Rugg, L. O. Smith, L. M. Terman, C. W. Waddle, and G. M. Whipple, chairman (the Society's Committee)

assisted by

J. R. Benson, E. R. Breslich, Arthur Brogue, Margaret V. Cobb, R. R. Cook, J. C. DeVoss, Anna M. Engel, E. M. Haney, H. C. Hill, K. J. Hoke, Leta A. Hollingworth, A. J. Martin, E. L. Moyer, Mary L. Patrick, W. C. Reavis, Grace A. Taylor, H. G. Townsend, C. W. Washburne, and W. L. Uhl

This extensive yearbook (443 pages of text) may be regarded as an attempt to gain further light and a more varied and comprehensive survey of the problem discussed in the Nineteenth Yearbook, Part II. Section I contains various reports and summaries of the more general aspects of the problem—the history of the movement for special training of the gifted, methods of locating such children, problems of organization and administration, the adaptation of the curriculum, non-intellectual traits of gifted children, etc. Section II presents numerous special studies of such children, with respect to their physical and mental traits, their educational achievements, their subsequent careers in the high school and university, and the outcomes of various school experiments in providing special training for them. Section III is a valuable annotated bibliography of 453 titles.

TWENTY-THIRD YEARBOOK, Part II (1924)

VOCATIONAL GUIDANCE AND VOCATIONAL EDUCATION FOR THE INDUSTRIES

A. H. Edgerton and Fifty Collaborators

This yearbook is one of the largest ever undertaken by the Society. The material for it was gathered and organized by Professor Edgerton from many sources and with the aid of half a hundred contributors. It affords, therefore, a comprehensive exposition of the present status of the branch of educational endeavor to which it is devoted. Section I, which deals with vocational guid-

ance, gives detailed accounts of what is already being done in various city schools systems, both large and small, and in colleges and universities, also accounts of methods of training vocational counselors. Section II deals with vocational education for the industries. It shows what is being done in typical part-time, or continuation, schools and in typical day and evening industrial courses in smaller cities. Further, there is discussion of the training of workers in industry, the training of foremen, and the training of teachers for vocational industrial schools. Both sections are supplied with bibliographies.

VOLUME TEN

TWENTY-FOURTH YEARBOOK, PART I (1925)

REPORT OF THE NATIONAL COMMITTEE ON READING

F. W. Ballou, W. S. Gray, Rose L. Hardy, Ernest Horn, Frances Jenkins, S. A. Leonard, Estaline Wilson, and Laura Zirbes

Under the chairmanship of W. S. Gray, this Committee, appointed by Commissioner Tigert in January, 1923, subsidized by the Commonwealth Fund, and assisted by numerous school and university specialists, has used the avenue of publication afforded by this Society to present what is one of the most authoritative and most useful general discussions of the problem of reading that has been made available. Among the topics considered are: the aims of instruction in reading, a modern program of reading instruction for the elementary grades and the high school, methods of developing a meaningful vocabulary, the relation of reading to literature and the other content subjects, materials for instruction, standardized and informal reading tests, recognition of individual differences by diagnosis and remedial work. A feature of the book is the series of specific recommendations in which the members of the Committee, by discussion and experiment, have been able to concur.

TWENTY-FOURTH YEARBOOK, PART II (1925)

ADAPTING THE SCHOOLS TO INDIVIDUAL DIFFERENCES

Franklin Bobbitt, B. R. Buckingham, S. A. Courtis, W. S. Gray, Ernest Horn, Jessie Mackinder, Helen Parkhurst, A. H. Sutherland, Mary A. Ward, C. W. Washburne, chairman (the Society's Committee)

assisted by

Cecilia Anderson, R. N. Brown, Grace E. Carter, F. E. Clerk, Mary H. Comings, U. J. Hoffman, Hilda M. Holmes, W. H. Holmes, W. H. Kilpatrick, S. A. Leonard, J. L. McCrory, H. L. Miller, W. C. Reavis, Margaret Smith, A. J. Stoddard, Elizabeth T. Sullivan, L. Belle Voegelein, and W. A. Wirt

Section I of this important yearbook describes the factors which under ordinary school conditions tend to produce maladjustments of pupils with respect to grading and rate of progress. Section II follows with a description of typical attempts to meet these difficulties by adjusting the school's organiza-

tion and methods of instruction. Section III details statistical results of experiments in the individualization of instruction, with special reference to the work at Winnetka. Section IV discusses the various problems which are encountered in thus adapting schools, and Section V outlines the steps involved in launching a program of this sort. Section VI is a critique of these proposals, while Section VII comprises an annotated bibliography of 76 pages.

VOLUME ELEVEN

TWENTY-FIFTH YEARBOOK, PART I (1926)

THE PRESENT STATUS OF SAFETY EDUCATION

M. B. Hillegas, A. B. Meredith, Z. E. Scott, A. W. Whitney, S. J. Williams, and G. M. Whipple, chairman (of the Society's Committee)

assisted by

Rena Allen, Mary N. Arrowsmith, Harriet E. Beard, Mary B. Day, Ruth C. Earle, H. S. Gruver, J. H. Harvey, Max Henig, Evelyn T. Holston, W. D. Keefer, Frances H. Miner, E. G. Payne, M. S. Pittman, Mary O. Pottenger, Idabelle Stevenson, and Ruth Streitz

This yearbook represents the product of coöperation between this Society and the Education Division of the National Safety Council. It traces the development of the safety movement in industry, in the schools, and in civic administration, shows how safety education has been introduced into various school systems, presents at great length and in full detail the materials and methods of a program of safety education for the elementary schools, with additional suggestions for the adaptation and extension of this program for use in high schools, and in rural and vocational schools. The volume concludes with a general discussion of the significance of safety education and the outlook for its future development.

TWENTY-FIFTH YEARBOOK, PART II (1926)

EXTRA-CURRICULAR ACTIVITIES

F. C. Ayer, C. R. Foster, E. K. Fretwell, L. V. Koos, J. G. Masters, M. C. Prunty, W. C. Reavis, Earle Rugg, and P. W. Terry (the Society's Committee)

assisted by

E. H. Chappelle, F. Fickinger, C. E. Hagie, M. B. Horner, H. C. McKown, C. J. Pieper, E. S. Simmonds, and Clifford Woody

Under the chairmanship of L. V. Koos, this Committee and its associates, by extensive canvassing of the country, has brought together a comprehensive statement of the present status of extra-curricular activities in the public schools of the United States. The Committee has not sought primarily to evaluate these varied activities or to prescribe rules for their inauguration or

control, but rather to state current practices with respect to such matters as honor societies, publications, student government organizations, debating, music, athletics, assemblies, and clubs of all kinds. These are discussed for elementary, for junior-high, and for senior-high schools. Special attention is paid to the relation of the teacher to these various enterprises.

VOLUME TWELVE

TWENTY-SIXTH YEARBOOK, PARTS I AND II (1927)

THE FOUNDATIONS AND TECHNIQUE OF CURRICULUM CONSTRUCTION

William C. Bagley, Franklin Bobbitt, Frederick G. Bonser, Werrett W. Charters, George S. Counts, Stuart A. Courtis, Ernest Horn, Charles H. Judd, Frederick J. Kelly, William H. Kilpatrick, Harold Rugg (Chairman), George A. Works (Members of the Society's Committee)

Associated Contributors

Otis W. Caldwell, Walter D. Cocking, Ellsworth Collings, Flora J. Cooke, J. L. Flanders, Harry O. Gillet, John A. Hockett, Marietta Johnson, Margaret Naumburg, Jesse H. Newlon, Raymond W. Osborne, Henry Carr Pearson, C. A. Phillips, Caroline Pratt, William C. Reavis, Ethel I. Salisbury, E. M. Sipple, Eugene R. Smith, A. L. Threlkeld, Carleton Washburne

From time to time, in a dynamic society it is imperative that we stand aside from the movement of affairs to review trends, to assay products, to map out new paths. The chief purpose of this Yearbook is a study and appraisal so far as agreement is possible of curriculum making in American schools—past and present.

For two years the Society's Committee was engaged in the development of one phase or another of the work, either in collecting and appraising the contemporary situation, in studying the chief trends of development in the past century or in prolonged round table conferences over similarities and divergences in educational theory.

This Yearbook presents three results of their efforts: a historical review, a description and evaluation of contemporary practices, and a statement of foundational principles for curriculum reconstruction.

Part I of this Yearbook attempts a description and critical synthesis of curriculum-making, past and present. Part II presents the committee's joint platform for curriculum-construction—a general statement of the foundational principles upon which the committee desires to see the next steps taken in the reconstruction of the school curriculum. Also the frank and interesting individual statements of the views of the several members of the committee.

VOLUME THIRTEEN

TWENTY-SEVENTH YEARBOOK, Part I (1928)

Nature and Nurture: Their Influence Upon Intelligence

Lewis M. Terman, Barbara S. Burks, Truman L. Kelley, E. L. Thorndike, Raymond R. Willoughby, Harold E. Jones, Helen L. Koch, Gladys G. Tallman, Mildred Burlingame, Calvin P. Stone, Frank N. Freeman, K. J. Holzinger, Blythe C. Mitchell, Agnes L. Rogers, Dorothy Durling, Katharine McBride, Joseph Peterson, Katherine Murdoch, Doris Maddow, Nettie L. Berg, Gertrude Hildreth, Florence L. Goodenough, Carolyn Hoefer, Mattie C. Hardy, Lois Doe-Kulmann, Arnold Gesell, Janet A. Matthew, Bertha M. Luckey, Katharine B. Greene, Mary L. Casey, Helen P. Davidson, Doris I. Harter, and Arthur I. Gates

Part I contains a very useful and important chapter furnished by Mrs. Herman Ramsperger of Stanford University on difficulties met in the statistical handling of the material of nature-nurture studies. Her section on the discovery and expression of degrees of causation among groups of dependent factors is particularly important, including as it does discussion of path coefficients and coefficients of determination. Other chapters contain a study of the intelligence of siblings by E. L. Thorndike of Teachers College, Columbia University, a comparison of white and negro children in rational learning by Joseph Peterson of George Peabody College for Teachers, a study of the effect of the nursery school upon intelligence by Florence L. Goodenough of the University of Minnesota, and a checking of the effects of training by A. I. Gates of Teachers College, Columbia University. These are grouped under seven heads: (1) Family resemblance; (2) intelligence and social environment; (3) race differences; (4) intelligence and schooling; (5) relation to health or physique; (6) constancy of the IQ; and (7) effects of coaching or special training.

TWENTY-SEVENTH YEARBOOK, Part II (1928)

Nature and Nurture: Their Influence Upon Achievement

Lewis M. Terman, Leta S. Hollingworth, Margaret V. Cobb, J. D. Heilman, Katherine M. Denworth, F. P. Obrien, Howard Taylor, M. J. Van Wagenen, William A. McCall, T. C. Holy, Lonzo Jones, G. M. Ruch, L. Dewey Anderson, June E. Downey, Mark A. May, Hugh Hartshorne, Guy M. Whipple, Joseph Peterson, M. C. Barlow, P. R. Farnsworth, and Barbara S. Burks

The investigations of Part II of the Yearbook are grouped under five heads: (1) Achievement and intelligence; (2) achievement and school attendance; (3) achievement and teaching ability or school methods; (4) achievement and school expenditures; and (5) achievement and effort.

The basic question asked in Part II is as to whether (1) native ability or (2) public school experience determines levels of pupil achievement in school tasks. The most careful answer is offered in Chapter II, where J. D. Heilman of Colorado State Teachers College reports the use among a group of 828 ten-year old public school children in Denver of expressions of amount for (1) mental age, (2) school attitude, and (3) home status to determine school achievement in terms of educational age. He uses Sewell Wright's path coefficient method and finds that at least "50 percent of the variation in educational age" is due to heredity as measured in the study. School attendance alone accounts for but about 5 percent of the differences in school achievement found in his group of ten-year old pupils, and if the influence of school attendance in combination with mentality be added, not over 13 percent to 19 percent of educational age can be attributed to educational exposure. The implications of these findings for probable necessary length of elementary education are very apparent. The chairman of the Yearbook Committee, L. M. Terman, says, "Results such as those of Heilman open the question as to whether eight years of school attendance is really necessary to bring pupils up to the standard usually achieved by the eighth grade. One wonders whether in the four or five years between ten and fourteen they might not learn to read, write, and spell as well, and master as much arithmetic, history, and geography as they would be likely to in eight years."

VOLUME FOURTEEN

TWENTY-EIGHTH YEARBOOK, PARTS I AND II

PRESCHOOL AND PARENTAL EDUCATION

Prepared by the Society's Committee

B. T. Baldwin (deceased), Arnold Gesell, Patty S. Hill, Douglas Thom, Edna White, Helen T. Woolley, and Lois H. Meek (Chairman)

Assisted by

W. E. Blatz, Agnes Burke, Grace Caldwell, Lelah M. Crabbs, Bess V. Cunningham, Mary D. Davis, Charlotte G. Garrison, Ernest Groves, Sidonie M. Gruenberg, Ruth Haefner, Francis A. Hungerford, Harriet Johnson, H. E. Jones, Grace Langdon, Elizabeth Lord, Lawson Lowrey, Elizabeth Moore, Mary Murphy, Winifred Rand, Mae Raymond, Mandel Sherman, G. S. Stevenson, Mary Sweeny, Nell B. Taylor, Flora Thurston, Leona Vincent, Beth Wellman, C. A. Wilson, and Elizabeth Woods

The Twenty-Eighth Yearbook is the most significant contribution that has been made to the literature of preschool and parental education. A request for a yearbook in this field was made to the National Society for the Study of Education in February, 1925, and the committee was formally organized in October, 1925. Dr. Lois Hayden Meek, Educational Secretary for the American Association of University Women, was appointed chairman and the other members of the committee were chosen to represent various aspects of preschool and parental education; Dr. Bird T. Baldwin and Dr. Arnold Gesell,

research in child development; Professor Patty Smith Hill, education of young children; Miss Edna N. White, home economics aspect of preschool and parental education; Dr. Helen T. Woolley, psychological aspects of personality problems of childhood; Dr. Douglas Thom, the psychiatric aspect of child problems. A generous grant from the Laura Spelman Rockefeller Memorial, supplementing the appropriation of the National Society for the Study of Education, made possible the work of the Committee.

The seven members of the Committee and the twenty-nine contributors associated with them, have assembled and presented in the Yearbook a most comprehensive survey of the present status of preschool and parental education. In setting forth the Committee's purpose for the Yearbook, Dr. Meek says in the introduction: "The Committee hopes that the present yearbook will help to show the trends of the movement, to point out the need for carefully trained personnel, to emphasize the varied influences of home, school and community life, and to focus attention on the total aspect of child development—physical, emotional and social, as well as intellectual." She further states that the Committee worked and thought together on practically every part of the book in an effort to unify the contributions of the many who supplied the wealth of data, and to present the material concerning the education of children and parents from a point of view which would integrate a movement participated in by many groups with varying objectives and backgrounds.

Throughout the book the term preschool refers "to the whole period of infancy and early childhood, from birth up to elementary school entrance at the age of six or seven." The term parental education is used "in its broadest sense to include all methods and devices of adult education intended to assist parents in the understanding and care of their children."

The book is divided into two parts—Part I on organization and development of preschool and parental education, and Part II on research and method in this field. In Part I, the history of the movement is given, including a brief discussion of the beginnings of the kindergarten, the Montessori school, the nursery school, child health centers, play schools and child study groups. The following general considerations underlying preschool and parental education are stressed: the importance of the preschool years from the standpoint of growth and development, the influence of home and parents, the need of supplementary educational agencies and fundamentally of educating parents themselves. The present organization of education for preschool children is given in considerable detail covering the family as an agency, day nurseries, maternity and infant welfare centers, the clinics, nursery schools and kindergartens. Part II also includes a survey of current programs in parental education and experiments in preparental training, and indicates what is being done in professional training for research and instruction in preschool education, in the professional training of nursery school teachers, and in the training of leaders in parental education.

Part II, on research and method, opens with research activities in the field of child development, indicating the present status of research in child development and citing the outstanding studies of motor, language, intellectual, emotional and social development and of physical growth. A section follows on educating preschool children, with a thorough discussion of child activities,

including those leading to the establishment of routine habits, play, art experiences, language and literature and social development. Provision for individual differences and the records of young children are also introduced. A concluding section deals with methods and materials for the education of parents and of practical ways of educating parents and teachers to the value of mental hygiene.

The Twenty-Eighth Yearbook is a very valuable source book in the field of preschool and parental education—a book which administrators, supervisors, teachers and parents interested in general or specialized education for the preschool child or the parent will find an indispensable addition to their libraries.

VOLUME FIFTEEN

TWENTY-NINTH YEARBOOK, PARTS I AND II (1930)

REPORT OF THE SOCIETY'S COMMITTEE ON ARITHMETIC

W. A. Brownell, B. R. Buckingham, G. T. Buswell, C. E. Greene, R. L. West, F. B. Knight, (Chairman)

Assisted by

E. A. Beito, J. C. Brown, L. J. Brueckner, J. R. Clark, W. F. Dearborn, Arthur Edwards, H. L. Harap, Ernest Horn, C. H. Judd, Fred Kelly, L. A. King, R. H. Lane, Josephine MacLatchy, C. R. Mead, R. L. Morton, Elma A. Neal, G. M. Norem, W. J. Osburn, J. R. Overman, Isidoro Panlasigui, Harriet E. Peet, F. G. Pickell, A. C. Repp, G. M. Ruch, C. W. Stone, Florence Stratemeyer, and C. W. Washburne

The Twenty-Ninth Yearbook of the National Society for the Study of Education was prepared by the Society's committee on arithmetic, of which F. B. Knight is chairman, and the membership includes W. A. Brownell, B. R. Buckingham, G. T. Buswell, C. E. Greene, and R. L. West. Thirty other active members of the Society assisted the committee in the preparation of this 700 page report, or acted as a special reviewing committee, whose critique of the work as a whole appears at the end of the Yearbook.

The Twenty-Ninth Yearbook is divided into two parts. Part I, *Some Aspects of Modern Thought on Arithmetic,* contains an article on "The Social Value of Arithmetic," by B. R. Buckingham; one on "The Arithmetic Curriculum," by West, Greene, and Brownell; on "Some Considerations of Method," by F. B. Knight; on "Testing and Diagnosis," by Greene and Buswell; and on "The Training of Teachers," by B. R. Buckingham.

Part II, *Research in Arithmetic,* contains a study of techniques by W. A. Brownell, a critical survey of previous research in arithmetic, by G. T. Buswell, and reports of eleven hitherto unpublished studies on various pertinent topics. The Appendix contains a *Critique of the Yearbook* by the reviewing committee, Leo J. Brueckner, chairman.

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